

**An Examination of the Reasons for Late Adoption
of Innovative Consumer Technology**

By

James Robert Sprenger

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Abstract

A late adopter is a temporal definition of a person that is part of the last group to adopt an innovation. Marketing research and the industry has paid the late adopter little attention. This study endeavoured to provide a deeper understanding of late adopters by examining the reasons behind their behaviour. The study conducted two focus groups, identifying themes that describe the reasons for late adoption. A key finding suggests that adoption is not clearly defined. A person may adopt from a marketing or financial standpoint, but not fully adopt the features of that innovation. For example, the focus groups did not use many apps on their smartphone. Apps are a unique and integral innovative component specific to smartphones. Other findings indicate that members understand their smartphones are part of a complex business system that may have implications on their adoption. Future research should examine all adopter categories, whether early or late in the adoption cycle. This would provide a full and deeper understanding of the innovation's complete market.

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Chapter 1: Introduction

Innovation gets a lot of attention. In April 2016, Elon Musk, innovator and CEO of electric car manufacturer Tesla, announced that his company had received deposits on over 400,000 preorders of the Tesla 3, a prototype sedan that he revealed a week earlier. The first one won't ship until 2017.

Marketers are interested in this adoption rate as it relates to the success or failure of new products introduced in the market. In a sense, a product has a life cycle where it is launched (birth) and eventually is discontinued (death). This product life cycle (PLC) illustrates an innovation maturing through stages as more consumers adopt. A new product is very expensive to launch in the infancy stage. Marketers focus their efforts on acquiring as many new customers as possible early on. At the introduction stage, distributors require higher margins to offset risk associated with a new product. Incentives may be required to persuade consumers to try the new product from an unknown company. A lot of advertising is also needed to reach and inform the market about the new product benefits. Marketers need to focus their effort on those most likely to adopt earlier in the product life cycle, before competition enters the market and dilutes the profit margins. Their goal is to acquire the largest amount of consumers within the shortest period of time.

Even when a product is no longer new, marketers still tend to ignore likely late adopters, due to the assumption that their resistance to change is strong and the cost to reach this small segment is too expensive. Once a product reaches this mature stage, marketers are developing new iterations of the innovation and targeting the early adopters again. Books, such as *Crossing the Chasm* (Moore, 1999) recommend focusing solely on early adopters. It explicitly avoids late adopters. Moore's perspective is that by the time the late adopters, or *sceptics* as he calls them,

embrace the product, the majority of the market has moved onto a new technology. Moore dismisses these late adopters as he calculates that they represent less than 15% of the market and seem to actively block purchases.

I have worked in marketing for the past 30 years. My undergraduate degree is in marketing research. I have been a full-time marketing faculty member since 2007. My life revolves around marketing. This paper is final piece toward my graduate work for the University of Alberta Masters of Communications and Technology. I chose to study late adopters as I believe that they have been overlooked, inasmuch as they can teach lessons to marketing professionals. Their reasons for their resistance are unclear. Much of the current data on late adopters posits that late adoption is a result of unmet needs (Matzler, Mooradian, Fuller, & Anshober 2014; Oreg & Goldenberg, 2015).

My dad will have little to do with new technology. He does not email, Facebook or text. He just recently got a mobile phone. However, he is well read, up-to-date on current affairs, (even without social media). He always had the best tennis racket, TV, gold clubs and a sophisticated audio system. He's a late adopter in certain respects, but current in others. In some cases, my dad can be described as a *laggard*. Adoption research defines laggards, or late adopters, as the last ones to adopt a product. The intent of these researchers was not to stigmatize the laggard label, but, nevertheless, a stigma exists in the marketing field. I suspect the stigma is a result of the characteristics ubiquitously described in marketing literature and the minimal impact laggards have on company profits. A "why bother" mentality toward laggards may prevail given the attractiveness of the more profitable adopters.

An examination of current marketing textbooks indicates that late adopters (or laggards) resist adoption because they are behind the times. They are characterized as suspicious of change

and change agents. Late adopters rarely communicate outside of their local network and tend to have lowest socioeconomic status. Change is forced, and they select the low cost, no frills product. (Keller & Kotler, 2014; Kerin, 2006; Lamb, Hair & McDaniel, 2011). As a business teacher, marketing professional and graduate student, these characterizations really trouble me. The characteristics seem myopic, especially given the abstraction of a consumer's innovative predisposition (Im, Bayus & Mason, 2003, Midgley & Dowling, 1978). I have to ask myself "what if late adoption is a question of needs not being addressed?" (Matzler et al., 2014; Rogers, 2003). Marketing literature provides little in the way of reasons for late adoption, other than a resistant characterization of late adopters.

Late adoption of any product can be viewed as simply a temporal phenomenon. It is more reasonable to blame the innovation or the business environment for failure to diffuse quickly into the market, than it is to blame a late adopter. Late adopters may be waiting for a more pertinent innovation. For example a man who owned a cassette tape portable recorder (e.g., Walkman) in the late 1980s may have completely skipped the portable CD disk player (e.g., Diskman) in the 90s and then adopted an MP3 player in 2001 (e.g., iPod). The reasons could be his Walkman broke and the MP3 player was all that was available, or perhaps the new iPod appealed to his design sensibilities. The reality is we don't really know the underlying reasons for his adoption.

Late adoption is an important field to examine. Some innovations need to diffuse quickly, such as in the case of the Ebola vaccine for Africa. Vaccines require near 100% compliance or there is a risk of the disease resurfacing, such as smallpox in the 1800s in Sweden (Nelson & Rogers, 1992). After a successful smallpox vaccine campaign in Stockholm, an anti-vaccination movement arose based on religious and individual rights. The vaccination rate in Stockholm dropped from 90% to 40%. Subsequently, a smallpox epidemic started in 1874. Understanding

the reasons for resistance has practical implications in the social innovation environment. Late adoption behaviour can have devastating effects in the case of social innovation.

The reasons for late adoption are not clear. There are much fewer studies that examine late adoption, than those that investigate early adoption. Marketers need a better understanding of the whole market, including late adopters. Studies on early adopters show they may influence the early majority, one third of all adopters (Rogers, 2003). This is critical in driving adoption by a significant percentage of the population (Moore, 1999). So, it is important to know what drives adoption. It is also important to know what puts on the brakes. Adoption may not always be beneficial. Consider the U.S. Housing Bubble during the 2000s. The banks gave mortgages to people who couldn't afford them. Those mortgages were bundled into bonds and other securities and resold to pension and hedge funds. They were labeled as very safe investments. They weren't. They were built on bad bets that mortgages would be repaid. They weren't and the defaults contributed to the 2008 financial crisis. Late adopters in the fund markets breathed a sigh of relief. Late adopters' insight and reasons to delay can shed light on weaknesses in the innovation's value proposition. The purpose of this research is to provide, a deeper understanding of the reasons for late adoption, beyond the characteristics popularized in marketing literature and suggest future areas for research on late adoption.

Chapter 2: Literature Review

Diffusion research examines the circumstances which effect the adoption of a new idea, product, or process by the members of a social system (Rogers, 2003). In 1943, researchers Bryce Ryan and Neal Gross examined the adoption of hybrid seed corn among Iowa farmers. These researchers showed that innovation adoption follows an *S-shaped curve* (Rogers, 2003, p.273). The original S-shaped diffusion curve was plotted by French sociologist Gabriel Tarde and is considered the first evidence of diffusion theory (Rogers, 2003). Tarde observed that the rate of adoption of a new idea usually followed this S-shaped curve over time. The S-curve shows three temporal phases of innovation diffusion. First a few adopters appear, represented by a gradual slope of slowly increasing adoption. As more adopt, the slope steepens and finally in the third phase the slope flattens, as the final few adopters are active at this late stage. The rate of adoption has become an important area of research to sociologists and marketers.

Everett Rogers built upon this early research (Ryan & Gross, 1943; Tarde, 1903) and expanded diffusion theory. Rogers (1958/1961) reviewed agricultural research studies that examined the rate of adoption of hybrid corn seed. Rogers noticed that the frequency distribution of the number of mean adopters in a given time period approached a normal *bell-shaped curve* and included this in his theoretical book, *Diffusion of Innovations* (1962).

Innovation Attributes

According to Rogers, an innovation is any idea, object or process that is considered new to a population. He proposed that certain attributes of innovations help to accelerate the diffusion process. These attributes of innovations are:

Relative advantage: the extent to which an innovation is perceived better than the one it replaces.

Compatibility: the extent to which an innovation is perceived compatible with adopters' past experiences, values and existing environment, including ancillary products and infrastructure.

Complexity; the extent to which an innovation is considered easy to understand and use.

Trialability: the extent to which an innovation can be experimented with before adoption.

Observability: the extent to which an innovation's benefits can be observed being used by others.

Rogers' diffusion work includes many constructs that may affect the rate of adoption. The attributes of the innovation itself (2003) can slow the diffusion process if the innovation is too complex or doesn't possess a relative advantage over existing offerings. A good example is the Segway, a gyroscopic electric vehicle, cited as revolutionary in the field of people transport at the turn to the millennium (Heilemann, 2001). It shows us how an innovative technology cannot find a market (Schneider & Hall, 2011). Adoption of the Segway presented a number of barriers. Could it be used on sidewalks, everywhere? How long does a charge last? Is it hard to use? Would it require a special license? Where can it be stored? In short, the value proposition did not outweigh the free alternative; walking.

Adopter Categories

Rogers' provides a summary of the characteristics of the adopter categories. Each category represents the population of adopters that fall within the boundaries of two standard deviations from the mean (Rogers, 1983, p. 247). It is important to note Rogers did not intend that these generalizations be considered innate characterization of adopter categories. He characterized the adopter categories as "ideal types", noting that exceptions exist (p. 282). This simplification helps us understand human behaviour (2003), "but loses some information" (p. 280) through the

statistical grouping of individuals. Also, Rogers' research is relative to the innovation under study, and not the characteristics of an individual across innovations. Categorization of an individual in one case may have little or no similarity to his or her categorization or adoption behaviour for another innovation.

Innovators. As the first to adopt, innovators want to experience new ideas. They present a small percentage (2.5%) of the diffusion population. Their adventurous nature leads them to seek information and access to innovation from sources outside their normal personal social network. They have the technical skills and knowledge needed to understand complex, new innovations. They are more tolerant of the disruptive performance of new innovations. They seek novelty and are the least resistant to adopt.

Early adopters. The second category is early adopters. They are thought to be more social than other categories. Specifically they are central characters in their social network. The later adopters look to them as opinion leaders that provide advice or information about new innovations. "Early adopters put their stamp of approval on a new idea by adopting it" (Rogers, 2003, p. 283). Although they only represent around 13.5% of the diffusion population, their adoption is imperative for diffusion to reach a critical mass (Moore, 1999).

Early majority. This category is thought to represent around 34% of the population. These members are deliberate in their adoption. They are not the first, nor the last to adopt. They are not thought to be opinion leaders, like early adopters. Their adoption decisions take more time than it the decisions of innovators and early adopters. The early majority have a more pragmatic approach to adoption of new products.

Late majority. The late majority includes 34% of all members of the social system. They wait until most of members adopt the innovation. They approach innovation with more

scepticism and adoption is usually an economic necessity or the result of pressure from their peers. Their scarce resources require that uncertainty be removed before the late adopters “feel that it is safe to adopt” (Rogers, 2003, p. 284).

Laggards. Laggards are more traditionalists, bound by their experiences of the past. They are a small (16%) category of the social system. Laggards are the most sceptical about innovations of all adopters. They are more likely to distrust change agents, those who try to accelerate the adoption of innovations. Rarely do they look beyond the members of their personal social network for innovation information. They are not opinion leaders, but may have influence on late adopters and tend to remain loyal to brands to which they are familiar (Uhl, Andrus & Poulsen, 1970). Laggards more likely to have limited financial resources and may require that an innovation work before they adopt. They are the most resistant, and likely to display cautionary behaviour before they adopt.

Diffusion and Marketing

Roger’s seminal (Essén & Östlund, 2011) publication (2003), *The Diffusion of Innovations*, has resulted in a ubiquitous characterization of the adopter categories. For example, modern marketing texts (Kerin, 2006; Kotler & Keller, 2014;) explicitly present these five adopter categories and their characterizations. These defined adopter categories have marketing implications. Marketing strategy focuses on the successful development and sale of goods and services. Communications is a key and expensive component of this strategy. Marketers spend their budget creating messages and choosing broadcast media that target the most likely to purchase. It goes to reason they would not focus their efforts on a small, resistant number of adopters. This categorization method “is the most widely used in diffusion research today”

(p.282) and prevalent in many marketing trade publications (Keller & Kotler, 2014; Moore, 1999).

Over time an innovative product enters the mature stage of its lifecycle (Day, 1981) and the adoption rate slows. This deceleration has been attributed to the characteristics of the *late adopters* or *laggards* (Rogers, 2003). Diffusion researchers have examined laggards and concluded they share generalized demographic characteristics that differ from the earlier consumers. Late adopters tend to have a lower income, less education and tend to be older than earlier adopters (Im, Bayus & Mason, 2003; Martinez, Polo & Flavian, 1998). Of course these findings are specific to certain innovations and may not be innate across innovations. Marketing literature does not clearly indicate the theoretical nature of the research. However, Rogers' categorizations provide a practical framework for marketing practitioners when developing strategy for new product diffusion (Moore, 1999)

The need for additional research on laggard behaviour was indicated in early marketing diffusion studies. Uhl et al. (1970) stated, "while knowledge of innovators may help secure acceptance among the earliest buyers, an understanding of laggards will help in understanding a product's complete market" (p. 54).

Additional research suggests that late adopters and laggards have not had their needs met and that an innovation may be too complex or time consuming to warrant adoption (Matzler et al., 2014). There is no lack of quantitative studies that examine diffusion and early adoption behaviour (Rogers, 2003). However, little qualitative data is evident on any adopter behaviour, early or late (Rogers, 2003; Lowery, 1991). The author of this paper could only find three qualitative studies (Lowery, 1991; Mallat, 2007; Kuisma et al., 2007) that explore consumer adoption behaviour in the context of the diffusion paradigm.

The need for a deeper understanding of adopter behaviour may be better addressed through qualitative methods (Calder, 1977). Midgley and Dowling (1978) argued that innate innovativeness and adoption behaviour is due to a series of social and psychological traits that are difficult to measure. Most normal innovation diffusion studies (Rogers, 2003) do not take into account the effect of marketing influence. The impact of communication tactics and strategy on innovation diffusion studies has not been included (Martinez et al., 1998), but arguably would have an effect on targeted adopters.

Laggards in Research

An examination of the diffusion research indicates that most adoption studies have been focused on early adopters and their acceleration effects on innovation diffusion (Essén & Östlund, 2011; Lowrey, 1991; Moore, 1999; Rogers, 2003; von Hippel, 1988). Early adopters are considered pivotal to the successful diffusion of an innovation (Moore, 1999; Rogers, 2003; von Hippel, 1988). Diffusion research describes laggards as traditionalist, living in the past, and suspicious of new products (Rogers, 2003). In short, these studies depict late adopters that represent the deceleration of the diffusion process and have received less attention in comparison to early adopter studies (Goldenberg and Oreg, 2007; Rogers, 2003).

This skewed perception may be explained by *pro-innovation bias* of researchers. Rogers (2003) describes pro-innovation bias as "...the implication of most research that an innovation should be diffused and adopted by all members of a social system, that it should be diffused more rapidly, and that the innovation should be neither re-invented, nor rejected" (p. 106). This is a reasonable conclusion in the case of new product diffusion studies. This type of marketing research would logically examine the variables where diffusion was successful. The practical implications are obvious. In this case, laggards are likely to be ignored because of their slow rate

of adoption, which is not considered economically viable (Moore, 1999). Consider that the laggard category is relatively small at 16% of the market. The cost to reach this population with information or product benefits to address their resistance may be less profitable than investing in new innovations. Harvard Business School Professor, Clay Christensen (1997) argues that the diffusion of disruptive innovation is imperative for a viability of big business. The premise of his research indicates that research activity must examine the innovators' and early adopters' behaviour. It is this behaviour that helps large companies identify opportunity and stay competitive in the marketplace

Rogers (2003) suggests there is *individual-blame bias* in diffusion research. If an innovation does not diffuse, the blame is put on the individual considered "traditionally resistant to change" (p. 121). Laggards, or the last to adopt, would be considered *most* resistant by definition. However, failure to diffuse could also be a result of the system environment that the individual is part of, or *system blame*. For example, a Learning Management System (LMS) provides system efficiencies for management, but may not offer a better or easier alternative to how the faculty manages the classroom. Slow adoption of an LMS among university faculty may be due to the innovation not meeting the faculty needs. Also, even if the innovation meets the needs or values of the individual, the system might not provide the infrastructure for diffusion. In the 1990s, Edmonton was considered more environmentally conscious because they recycled their cans more than Calgary residents. A closer look revealed that Edmonton had curbside pick-up of cans, whereas Calgary did not. It was easier to recycle cans in Edmonton. This is clearly a case for system-blame.

Innovation and Innovativeness

The terms innovation and technology are often interchanged (Rogers, 2003). Innovation can be viewed as a continuum starting with a simple *continuous innovation* that requires no new behaviour on the part of the consumer. Upgrading to an iPhone 5S from an iPhone 5 is an example of a continuous innovation. On the other end of the continuum is the *discontinuous* or *disruptive* innovation, one that launches a previously unknown product into the market. The introduction of virtual reality headsets (Samsung Gear VR) may require a longer learning curve than playing a new video game with a familiar controller and video screen. Discontinuous innovations require major change on the part of the adopters. (Robertson, 1971). Rogers (2003) refers to this continuum of innovations as a *complexity* attribute that affects the rate of diffusion. The perceived complexity of an innovation is negatively related to its rate of adoption.

Rogers' depiction of laggards is presented as an innate characteristic in most contemporary marketing texts (Kotler & Keller, 2014; Kerin, 2006; Lamb, Hair, & McDaniel, 2011). Arguably laggard behaviour is not so independent (Rogers, 2003). Innovation adoption may vary based on the type of innovation or product category. For instance, an avid cyclist may purchase every new technology for their mountain bike. However, they may have no interest in the technology embedded in new vehicles, such as smart phone connectivity or a heads-up display. In this sense, innovativeness is considered a *domain-specific personality trait* (Goldsmith & Foxall, 2003) where innovative behaviour does not overlap across distinctly different product categories.

Goldsmith and Foxall (2003) also state that innovativeness can be described as a *global-personality trait* that has enduring, predictive qualities. The global-personality trait measures a person's reaction to new and different things. Other behavioural studies add to the construct that measures innate and predictive innovativeness. Shaul Oreg (2003) examined the individual-

difference component of *resistance to change (RTC)* that aims to predict reactions to specific change. His RTC measurement scale indicated individual traits that are not domain specific and have predictive characteristics. Studies that employ domain and global personality measures may provide more complete understanding of adopter categories.

Many diffusion studies use the innovativeness construct as a temporal measure indicated by the time of adoption (cf. Aral, 2011; Rogers, 2003; Wakolbinger & Günther, 2013; Van den Bulte & Stremersch, 2004). Rogers' characterizations of adopters are not innate, since they are only attributed to the adopters based on the time the innovation diffused and the innovation itself. A person may be a laggard/late adopter for one product and early adopter for another.

Rogers' simple, temporal approach to the concept of innovativeness has resulted in a number of studies that look into a more sophisticated explanation of innovation diffusion (Goldsmith & Foxall, 2003, Oreg, 2003). The problem lies in the measurement of innovativeness. Rogers' construct is part of its measurement. Therefore the construct cannot be separate from the innovation itself (Midgley & Dowling, 1978). So, Rogers characteristics of laggards must be tied to the innovation being measured. The relative time of adoption is too simple to indicate any relationship with a laggard's characteristics (Midgley & Dowling, 1978).

Laggard Stigma

The author struggled with the term laggard. Explicitly, it does not engender qualities one wants to possess. By definition a laggard is a "person who makes slow progress and falls behind others" (n.d., Oxford Dictionary Online). Rogers' use of the term laggard makes explicit sense, since laggards lag behind in the adoption process. The author has chosen to use the term *late adopter*, a more natural term that does not suggest a conscious choice or stigma, but rather the

time of adoption. The term *laggard/late adopter* will be used when referring to diffusion literature where the laggard construct exists.

Late Adopters' Resistance

Diffusion researchers have spent a lot of time on understanding innovators and early majority adopter categories. These categories are considered pivotal to the diffusion and economical viability of a new product (Moore, 1999). However, diffusion rates of an innovation eventually slow. Marketing literature associates these slow-downs with the innovation entering the maturity stage of the *product life cycle* (PLC) (Dean, 1950). The PLC is often associated with Rogers' diffusion curve and slowing sales are associated with later adoption (Kotler & Keller, 2014). Dean (1950) proposes lowering prices and employing reminder promotions to entice utilitarian purchasers away from new competitors that enter the market. These policies are well documented (Kotler & Keller, 2014) and late adopters have realized that prices will eventually come down and competition will improve the offerings. Laggard/late adopter behaviour may not be traditional and isolate, but rather a strategic choice to get the best price and better product to meet their needs.

Diffusion research has permeated into the marketing domain given the economic implications of understanding and influencing consumer behaviour. The premise of most studies is to examine innovative behaviour (Gatignon & Roberston, 1985; Robertson, 1971; Rogers, 2003). However, innovative behaviour has not shown to be strongly linked to specific personality traits (Foxall & Goldsmith, 1998).

A number of behavioural constructs have been associated with diffusion studies, including adoption, rejection, resistance, acceptance, approval, trial and postponement (Nabith, Bleom & Poiesz, 1997). If late adopters eventually adopt, it is important to examine their postponement or

resistant behaviour. Researchers have identified the barriers that create resistance to adoption (Kuisma, Lauukkanen & Hiltunen, 2007; Oreg, 2003; Ram & Sheth, 1989; Sygman & Foxall, 1998). Ram and Sheth (1989) indicate resistance is a result of psychological and functional barriers to innovation adoption. Findings by Kuisma et al. (2007) confirm that resistance to Internet banking by late adopters can be attributed to these barriers. Functional barriers include: incompatibility with consumer habits, lack of economic or performance benefits; or perceived physical, economic, functional or social risk. Psychological barriers are the result of breaking with tradition or negative image associated with the innovation (Ram & Sheth, 1989).

Change introduced by innovation disturbs a consumer's equilibrium, so resisting change can be considered a normal behaviour (Ram, 1987) although at different personal tolerances (Oreg, 2003). Resistance to adoption presents an important area for study. Late adopters would logically display the highest threshold of resistance behaviour. A better understanding of the reasons associated with resistance could have practical applications. If marketing research uncovers the reasons for the most resistant adopters, this would theoretically address resistance for all adopters, albeit at different thresholds. In any case, there is an argument that adoption/resistance may depend on situational characteristics, consumer characteristics or both (Ram & Sheth, 1989).

Gaps in Diffusion Research

Laggards/late adopters represent a relatively small portion of innovation adopters (Rogers, 2003) and have not been the focus of many studies (Oreg & Goldenberg, 2015). Adoption acceleration however, has been the topic for many research studies (c.f. Aral, 2011; Rogers, 2003; Wakolbinger & Günther, 2013; Watts & Dodds, 2007; Van den Bulte & Stremersch, 2004). However, the last to adopt are not really associated with the acceleration of innovation

diffusion (Rogers, 2003; Matzler et al., 2014; Oreg & Goldenberg, 2015). Interestingly, studies have indicated that late adopters may influence the late majority (Uhl et al., 1970, Oreg & Goldenberg; 2015; Matzler et al., 2014). This could be important since the point of adoption by the late majority is where innovation diffusion hits a critical mass. At this point, half the population has yet to adopt, a significant amount that warrants consideration. It would seem prudent to have a better understanding of late adopters and why they resist, especially if they might have an upstream effect on diffusion.

In the case of consumers products, diffusion studies may not focus on the laggard/late adopters given their lower return on investment compared to other groups. However understanding the reasons for their resistance could prove valuable in other fields, such as healthcare. Diffusion of immunizations is not just desirable, but critical in eradicating disease. Innoculations, such as the measles vaccine, require a diffusion rate 90-95% into the population to eliminate the disease. This is referred to a herd immunity (Katz & Hinman, 2004). Given that late adopters may represent 16% of any social system, it is crucial to have them adopt, especially since diffusion studies do not account for non-adopters. It makes sense to study the most resistant adopters first in this scenario. If the research community had a better understanding of late adopters, this may have practical implications that could accelerate adoption by the late majority.

This literature review presents a number of issues that predicate the need to understand the reasons for late adoption. Late adopters are the least studied of the adopter categories. A better understanding of why they adopt later would provide the research community with a more complete description that marketers could consider in their new product development strategies. Late adopter research may prove vital in the case of life saving innovations. *Diffusion of Innovations* is a complex meta-theory that examines a number of variables that affect the

adoption of a new technology, idea or product (Rogers, 2003). Rogers explored the adopter; the innovation itself; the social system; decision-process; and communication channels: all which theoretically affect diffusion. More data may offer a better understanding of the reasons why late adopters hesitate to adopt and provide the impetus for further study of the latter half of adopters in the diffusion research process.

Chapter 3: Method

This study was designed to gain a deeper understanding of laggards/late adopters, characteristically defined in diffusion studies (Rogers, 2003), by exploring their reasons for late adoption behaviour in their own words. A qualitative approach was selected to explore the underlying reasons for late adopter behaviour. This method of inquiry allows for focus on the meaning of what a participant has on an issue (Creswell, 2009).

Qualitative analysis can take a clinical, heuristic or exploratory approach (Calder, 1977). Clinical analysis seeks to uncover the real and/or hidden causes of behaviour. Research that takes a heuristic approach looks to describe experiences and observe the *intersubjectivity* of different groups. This paper takes an exploratory approach based on “the social construction of reality by a set of actors” (p. 355).

Focus Group interviews are a qualitative research method used in both marketing research and social sciences (David, 2007). Business discovered that focus groups could be used to improve products to peak consumer interest (Morgan & Krueger, 1993). The method described in this paper is similar to focus group studies used for marketing research.

Focus groups in marketing research fall under two main study categories: (i) studies that unveil consumer attitudes and interests and; (ii) studies about products, consumer interest in those products and the way the purchase those products or to discover method to improve those products (David, 2007). Focus group studies are designed “to generate a rich understanding of participant’s experiences and beliefs” (Morgan, 1988, p. 11). A strength of focus group is the ability to “create a process of sharing and comparing among participants” (p. 12). The researcher planned to use this method to explore a deeper understanding of late adopters and how that may compare to the characterizations depicted in diffusion studies and marketing.

Research Design

The plan for this research was to conduct two focus groups. Each group was to be made up of eight to five members. The number of participants are consistent with that recommended by most research (Krueger, 1994; Morgan, 1997). The small number perhaps will allow for more in-depth discussion in lieu of varied perspectives. Two groups were selected to examine for consistency and contrast. The nature of the study was not to seek data saturation, but provide a more robust description of the reasons for late adopter behaviour. These focus group interviews were estimated to last 90 to 120 minutes, based on the questions prepared in the discussion guide (Krueger, 1994).

The study design called for homogeneous groups made up of late adopters of new technology. The researcher sought to provide an environment where perspectives were shared and valued by the participants. "Homogeneous groups....are generally more comfortable and open with each other, whereas mixed sex, ethnic, or socioeconomic groups make it more difficult to achieve a high degree of group interaction" (Keown, 1983, p. 66).

The researcher chose to examine the consumer market, as they are the implied subjects of late adopter category characterization. An innovation that was ubiquitous in the population for the last several years needed to be identified. Smartphones (eg: Samsung Galaxy or iPhone were specified), tablets (eg: Surface, iPad or Fire were specified) and wearables (Fitbit, Pebble or Apple Watch were specified) all fit these criteria. The specified products are popular brands in the current market. Interested contacts were considered for participation if they self-selected based on adoption of any of the aforementioned technology products in the last two years.

The planned research design used a convenience sample from the principle investigator's personal email and Facebook network to identify potential participants. According to Dörnyei

(2007), the convenience sample is determined on what is convenient to the researcher.

Considering that late adopters may not form a large or visible population, a snowball method was also planned, where participants are recruited through “referrals made among people who share or know of others who possess some characteristics that are of research interest” (Biernacki & Waldorf, 1981, p. 141). The initial network contacts were requested to reach out to their network for possible candidates if they themselves did not fit the selection criteria. A recruitment contingency was planned through the researcher’s personal Facebook page. A Facebook notice was developed for this purpose. This recruitment method follows Glesne & Peshkin’s (1992) recommendation to sample through existing networks, using the assistance of a contact person.

The researcher would moderate each session. Researcher-led moderation is ideal when the planned research is fairly structured and requires a certain level of expertise with the research subject matter (Krueger, 1994). Also, his age and familiarity would lend to providing comfort, trust and an ease of interaction with that audience (Krueger, 1988).

Consent, Risk, Confidentiality, Anonymity and Data Collection

All interested participants who contacted the researcher received an information and consent form that they could either fill out in advance or complete at the focus group session (see Appendix A). The document provided a summary of the study and risks associated with participation. Consent for the study was to be indicated and documented by the signed form.

Provisions were designed to securely store the digital audio recording of each session after transcripts were completed. The audio device was to be under lock and key in the office of the researcher. The digital audio file and transcripts were to be stored on a password-protected computer. The consent form stated that confidentiality is a shared responsibility between the

researcher and the participants outlining the responsibility provisions and limitations for both parties.

Any potential identifiers (including names) captured in the raw data transcript were to be deleted by the researcher.

All recorded data pertaining to the study will be kept under lock and key for five years and then securely deleted.

Focus Group Discussion Guide

The discussion guide endeavoured to include Merton & Kendall's (1946) four aspects to be observed in a Focus Group interview:

- (1) Cover the maximum number of important topics;
- (2) Provide specific data;
- (3) Encourage interaction that explores the participants' feelings
- (4) Account for personal context of participants' responses to the topic.

The guide was written to proceed in a similar order for both groups, as their responses were to be compared in the analysis phase of the research. Another benefit of designing a specific order was the ability to discuss any consensus and key insights between the moderator and the research assistant. The focus group questions followed the recommended *questioning route* design outlined by Krueger (1994). A questioning route asks specific questions written in a conversational tone. The questioning route makes comparison easier in the analysis phase, due to minimal variance in the questions. The discussion guide outlines the questions planned for this study (see Appendix B). The types of questions used are presented here:

- 1) An *opening question* was developed to put participants at ease. This question was designed to break the ice. There was no intention to examine the data from this question, however, the members were not specifically informed of this intention.
- 2) An *introductory question* was written to inquire about the members overall experience with technology. The question was intended to examine the member's general attitude toward technology, specifically smartphones, wearables and tablets.
- 3) A *transition question* was written to segue into the key questions around reason for late adopter behaviour. This question was designed to be fairly easy to respond to as it spoke to any advantages or benefits that technology may offer. Advantages are a key area in Rogers (2003) *Attributes of Innovation* that can affect the diffusion of innovation.
- 4) The *key questions* were developed to elicit the participant's perspective in regard to innovation complexity, barriers to adoption and specific diffusion influencers. These questions were designed to help the researcher gain a deeper understanding of the reasons for late adopter behaviour. The moderator expected to *follow-up* with *un-planned probe questions*. This part of the focus group had the most potential for un-structured responses and probe questions, based on the open-ended nature of the key questions. The key questions were designed to account for the majority of discussion.
- 5) Planned probing questions – *Follow-up questions* that dug deeper into the reasons for late adopter hesitation and diffusion influencers were included in the discussion guide.
- 6) Ending questions – The questioning route ended with a question that facilitated additional information that any and/or all members felt was missed and/or important to add.

Analysis Strategy

The analysis approach to focus groups that was planned would enable the researcher to categorize the session comments and discover themes from the sessions (Krueger, 1994). This approach is similar to *constant comparison analysis*. Developed by Glaser and Strauss (1967) *constant comparison analysis* is an approach where the researcher attaches a code to a focus group member's comment he/she determines is important in the context of the research. The codes are categorized and finally the researcher develops themes that reflect the content of the sessions (Strauss & Corbin, 2007).

The principle investigator planned to meet with the research assistant to review each session. A 30-minute debrief session was planned after the participants left. The researcher and assistant were to review their own notes and try to recall what was discussed. Then they were to share highlights, areas of consensus/disagreement and insights from the discussion. The researcher was to develop a summary of this debrief for his records.

Each focus group was to be recorded using a digital recorder. Those recordings were to be transcribed by the researcher. The author planned to review the unabridged transcript and make notes, codes, and develop categories. The process to manage the transcripts was to take the transcript and enter it into a spreadsheet. This would make it easier to keep track of the comments and move them as required. In essence, this is a digital version of the *Long-Table* approach, where researchers spread and rearrange the transcript comments out on a long table that remain there until the analysis is complete (Krueger, 1994).

Each important comment from each session would receive a code. Figure 3 is a flow chart adapted from Krueger's (1994) Focus Group Guide Codes to determine what to do with each comment from the sessions.

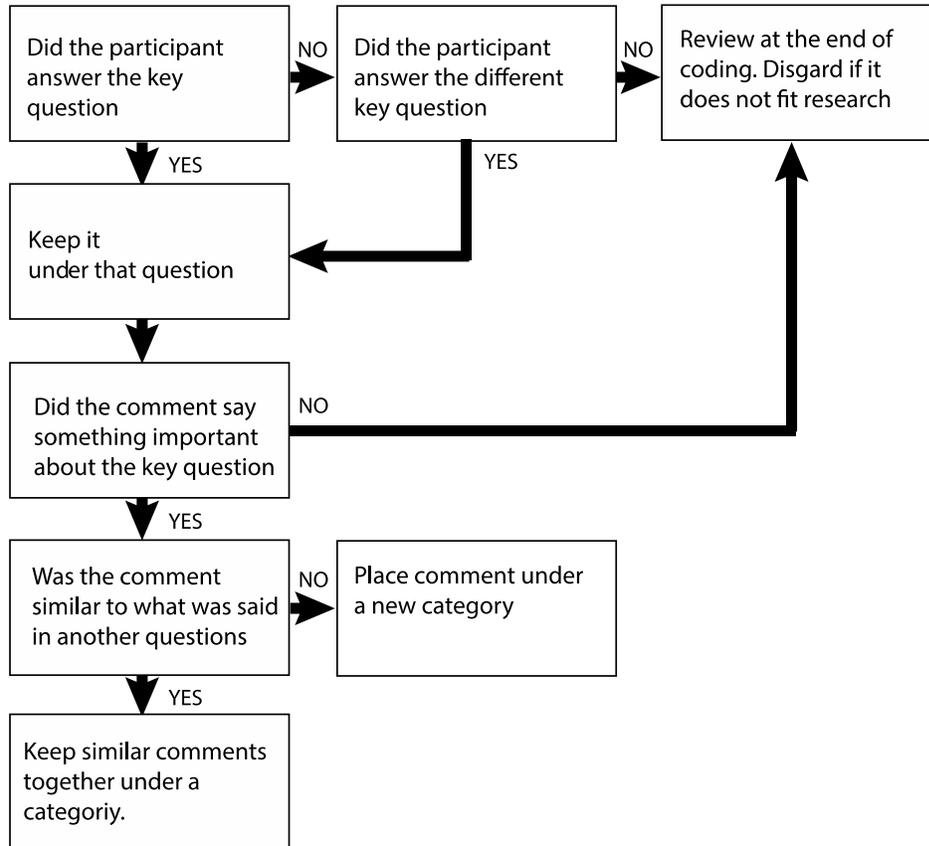


Figure 3 – Comment Coding Flow Chart

Each comment was to be identified with the focus group session, the speaker and under a category developed by the researcher. This filtered document was to be analyzed for themes. The researcher planned to prepare a thematic report that summarizes each theme and compares and contrasts the findings from each focus group session. The report is expected to have direct quotes from the transcript to support the researcher's analysis. This systematic, sequential analysis process (Krueger, 1994) helps ensure that the findings reflect what was said in the sessions.

Chapter 4: Findings

The focus group discussions were conducted with the purpose of providing a deeper understanding the reasons for late adopters' behaviour compared to the characteristics described by Rogers (2003) and contemporary marketing texts (Kotler & Keller, 2014). Two focus group discussions were conducted consisting of three persons each. All six participants were drawn from the moderator's email or Facebook network. Some of the contacts reached out to their networks, but this snowball sampling technique did not produce any potential participants. The participant ages ranged from mid 20s to mid 50s. The size for each group was less than anticipated as getting late adopters to participate proved a difficult task.

Although the participants in each group did not know each other, the moderator was familiar with each participant and endeavoured to make the meeting conducive to open, friendly discussion.

The study focused on three innovations: i) smartphones; ii) tablets; and iii) wearables. Although all three were mentioned to some degree, smartphones were the only innovation that all participants owned and adopted in the last few years.

The investigator moderated the focus group discussions. He provided a brief description of the procedure initially and facilitated the discussion. The questions followed the discussion guide order for both groups, but some additional unstructured probing questions were asked that were specific to each session. The first session ran just over an hour and the second was 50 minutes. There was no apparent dominance of any participants during the sessions, however the amount of participation by each attendee varied. During the sessions the moderator did not use the term *laggard*. Instead the term *holdout* or *late adopter* was used.

The assistant gave insights to the investigator after each meeting as planned. Each session was digitally captured on an audio recorder and a backup recorder. The audio recording was checked for quality and a transcription was made for each session. All personal identifying information was deleted from the transcripts and gender identification was also removed. The verbatim transcripts of the focus group discussion are presented in Appendix C.

The transcript for the first focus group labelled the members FGA.

The transcript for the second focus group labelled the members FGB

The investigator reviewed the transcripts and compared them to the recordings. He made corrections to the transcript where evident. He coded the transcripts following the content analysis process outlined in the method plan (Strauss & Corbin, 2007).

Themes

The major themes that evolved from the discussion were:

Theme 1: characteristics of late adopters

- Traditionalists or Progressives
- Scepticism and Conspiracy
- Network Influence
- Resource Allocation

Theme 2: attributes of innovation

- Relative Advantage
- Compatibility
- Complexity
- Observability

Theme 3: switching costs

Theme 4: domain-specificity: late for one, early for another

Theme 5: global Personality Traits of late adopters

Theme 6: strategic behaviour of late adopters

Theme 1: characteristics of late adopters.

Traditionalists or progressive. The focus group discussions revealed that some late adopters specifically saw themselves as traditionalists. A traditionalist wants their world to stay the same. For example, they may prefer vinyl records and turntables to MP3s and iPods. The focus group members limited what innovation features they used, citing specific personal reasons for their limited adoption.

I wouldn't want to ever become overly reliable on something like that [technology]. I'm just enough old-school, that I wouldn't want it to run my life.

I don't really have a lot of technology at my home. I have a phone that was given to me by my mom, because it was cheap. And that's all I think about, when I think about phones. It's just something that will allow me to make a phone call or get important phone calls, and that's about it.

Participants also indicated they did not see the value of technology and their features over how they do things now, supporting their traditionalist point of view.

Like I don't really... I know that I get lots of exercise and I know that I'm fit and I know that I probably eat too many calories in a day and I don't need a thing to tell me that ... because I already know and in terms of a tablet well I've got my desktop and I've got my phone and I've got a computer at work

and ...there's no need (participant describing wearable technology or “thing” such as a FitBit or Apple Watch).

The majority of participants suggested that smartphone applications (Apps) have little value.

Most of the Apps, I don't care about most of the—I don't care about the Apps really. New Apps or games Apps or—like the availability of thousands and thousands of Apps..

Scepticism and conspiracy. The *text-to-talk* on smartphones was a feature of the technology where the benefit was met with scepticism. .

... all of them were using the talk to text. So they would just...you hear them go “[Name removed] what time are you going to be here” and you are sending a text, right to their daughter. And so my whole thing is well, if you are going to do that, well... you can just call her.

Scepticism was evident when the technology was not consistent with existing values, habits and past experiences.

I can take my own heart rate or anybody's heart rate without needing a gadget, which I find they're not that accurate ... Yeah, there's just there's no...there's no need for it.

The term *conspiracy theory* was mentioned twice during one discussion. One member mentioned forced upgrades and another a lack of privacy where their online activity is surreptitiously used to market goods and services.

I feel like we're just being led down the path with all these upgrades that everybody has to have, to some degree. And I sort of reject the whole notion

of constantly having to upgrade or have the best and the newest, just so that the shareholders are getting their due.

The idea that you're being watched a lot... Like, there's this sense of being watched, like there's no privacy of any kind...here's no privacy left for anything, even with Facebook, nothing. There's nothing, not even your personal phone, they track what you look at and then they send you stuff. You'll get some kind of email. 'We noticed you were looking at flights to Portland'. Like, so, I do think in some ways, that does create a reluctance, at least on my part.

Network influence. Both focus groups had members that indicated that their close local network was who they turned to for advice on new technology.

Family, definitely [spouse].

...probably, like my friends because all my friends always get everything before me. And then I just get their opinions on it and then I purchase whatever they tell me works best with them.

Members in the first group also stated that they turned to their own research when asked about where they look for influential advice. This wasn't so much a disagreement within the group, but rather additional behaviour, seeking advice beyond their personal network.

...if I go on the [Inter]Net and people are commenting like, 'I bought this and it was good for the first six months, but then I had all these problems,' and a lot of people comment about that...I can't buy the simplest thing without having done like 10 hours of research on the product and is this better or is that better?

I usually go to Google, look at reviews, research, past experiences as well from work, seeing other people work with PC versus a Mac, feedback from colleagues. So, just a combination of all of those things, but mostly, I would probably go and research 'best computer for graphic design', ...I would probably do my own research and count on maybe one or two of my close colleagues that are experts in telling me, maybe, you should buy that, and I would trust that over anything else, yeah.

Resource allocation. The investigator believed the respondents probably had the financial means to purchase the technology under study. This was inferred as all participants had smartphones. However, income, resources and their purchase of the smartphones were not discussed. In any case, the cost-benefit relationship of technology purchases was a consideration in both groups.

I think also there's a cost associated with it. And so there's sort of the value proposition, like am I going to go and spend this money? When other people use it, it sort of gets proven and then you can see what other people are using it, if that's something that's valuable to you or not.

...do I really need this? I really question whether I'm really going to get the use of it and if that's where I want to put money.

The investigator made no provision to determine if their technology, specifically smartphones, were purchased as a gift; using their own funds; or purchased by their employer during the recruitment process.

Theme 2: attributes of innovation.

Relative advantage. The relative advantage of innovations saw the most discussion in both groups. Convenient social connection to family and work were the most prevalent positive benefits noted in the discussion, followed by the instant access to valuable information.

...The biggest benefit, I think for me, is being able to find out where my kids are at any given moment. And if they're not showing up at midnight or 2AM, then I can text them and I usually get an answer right away. 'It's OK. We're at so and so's house. Everything's good'." (in response to what is the benefit of innovation).

I just find looking up in the Internet and finding things you know the information is at my fingertips.

The immediacy of social connection through smartphones did have a paradoxical discussion as well. The invasion of privacy and expectation to being instantly accessible was mentioned.

But it's also the same thing as a drawback, which is there's an expectation of being available all the time, right? Because, why didn't you answer my text, it was three hours ago." (in response to what is the benefit to innovation)

Also, there was a definite concern voiced by a younger member in relation to the negative impact of distracted digital behaviour in the workplace.

...our supervisors are cracking down on us so that if they see the phone in your hand while you are [working], like they get really angry or they write you up.

One interesting finding was how the advantages were described in terms of the benefits in the workplace as opposed to personal recreational use.

So they used to have these huge board binders that somebody used to have to prepare like 25 room board binders, or hundreds of pages every quarter, and now they do everything on the iPad. And they just go to the meeting with the iPad, and they can call up meetings of past minutes (describing the advantage of tablets in a boardroom environment).

...we're out camping a lot, so we see the sky a lot, and there's an App for if a satellite's going. We can open this [App] and it will tell you which satellite it is, who launched it, those sorts of things. So, that kind of technology is fun.

The different perspectives of the technology may have been a result of how the consumer acquired their smartphone.

[when] I got my latest phone, you had a choice between iPhone 5 and iPhone 6 (describing participant's work required smartphone)

[the technology] maybe more of a toy than a necessity and it was a gift.

I have a phone that was given to me by my mom, because it was cheap.

I also did not purchase that iPad for myself.

In the first case the smartphone was required for work. It was not clear whether the participant had used his or her own money. The other participants indicated their technology was given to them or a gift.

Compatibility. Most respondents agreed that smartphone technology, and tablets to a certain extent, have their place in their professional environment. Compatibility was apparent

and mirrored the relative advantage of connectivity. That connectivity also had the same paradoxical effects mentioned earlier.

I find the email really useful if I'm on holidays. I used to just stay away from the phone for two weeks and come back and there's a lot of fires to put out when you get back to the office. Now, I can deal with most of the stuff, I just have to spend maybe an hour each morning on work related issues

Utility seemed to be an indicator of whether or not an innovation fit with a member's lifestyle. Past experience with technology and their basic needs determined the value of the innovation and the extent to which they used the available features.

—I have whatever I need to get through. I need a laptop so I can do work, get on the Internet, do things that I need to do there. A phone to stay communicated.”

I've seen nothing that I needed to—I've never spent enough time to look at the phone, other than when I need to use it.

Complexity. Discussion around complexity fell into two categories. First, the user interface aspects of smartphones and tablets were not considered too complex once shown how to use it.

In my case I had to get someone to show me how to use it, but now that I know how to use it, it's pretty easy to use.”

I think I just use my phone very...in a very simplistic manner. And...so yes, I find it pretty intuitive.

However, the second point to note is the more complex features of an innovation had a resistance effect.

I don't know I just I'm not like I think it's just if it's too hard to use I don't want to go through that thought of trying to use it.

...it you know it's something that I think about but never feel I have the time or the energy to put into it and it's not something that comes easily for me.

In more than one case, the discussion indicated that an increased cognitive load is brought on by innovation itself and the infrastructure supporting the innovation.

Sometimes I have to ask people for help or when something goes wrong it's a complicated process. And I'm going to the store and they back everything up, send your phone off repair and give you a little stand-in phone and download your stuff onto there and it can be such a rigmarole if something goes wrong. So the speaker on my phone has been broken for a year and I've never gotten it fixed.

My speaker was broken for like six months and they told me you have to back everything up and I just didn't know how to do that so I just ignored it.

Observability. The ability to be able to observe the innovation being used came up numerous times in both focus groups. Observability influenced the adoption process for a number of members.

...When other people use it, it sort of gets proven and then you can see what other people are using it, if that's something that's valuable to you or not.

...I can see some of the things that they're able to do with it. My staff, as well, influences my purchases in terms of technology. Again, I can see what they're able to do.

It is important to note that the adoption influence were often associated with observation of their *personal network*.

Theme 3: switching costs. The adoption of a smartphone requires you to enter into an agreement with multiple parties. First you need to adopt the smartphone system infrastructure, be that IOS for Apple, Android for phones using that software or another operating system altogether. Second, there is the matter of system service with telecom companies. The telecom service subscriptions add another level of complexity to the adoption of smartphones. This study showed that switching costs, be they manufacturer; operating system; or service based, are a potential impediment to innovation adoption.

You're almost roped into one system, right? Like now, I would never go away from iPhone, because everything's on my iCloud. Now, I'm not going to get an Android because I'm not going to start messing with the iCloud, right?

...we started at a long time ago being Apple users and so I like to go with what I know. And so we've just kind of kept with Apple all along and that does make it easier as far as...purchase decisions.

At the end of the day, if I had a free iPhone, I would probably take it and figure it out, like figure out the system and all of that. But, I think, maybe a lot of people don't because it's either you are in a two or three year contract to pay off this phone. Or you have to, out of pocket, five—six hundred dollars.

Theme 4: domain-specificity: late for one, early for another. This study noticed that members readily adopted some innovations, but resisted others. One member had adopted a Fitbit wearable based on their interest in fitness, but had no interest in tablets. In addition, it is interesting to note that member's smartphone was two generations old and was not completely

compatible with the wearable. They were aware, but had no indication they would update their phone.

The Fitbit ...is a bit of a motivator for me to do something. I'm active as it is, but it's nice to be able to monitor heart rate and things like that and exercising. And it's nice to know how far you've gone or what speed you've come down a mountain on.

...It's a benefit, but it's more a toy, I think, in that regard.

...But in terms of technology, a tablet I've never seen a need for one. I'm not interested in electronic books. I'd rather open the real thing, so I know I'll never have an electronic book...

...And [the Fitbit] doesn't work with 4S [older smartphone], which is quite annoying. There was a glitch in the system. So, I need to upgrade my phone if I want to have the full benefit which is something that really ticks me off about technology

Theme 5: global personality traits of late adopters. The findings do indicate some possible inattentiveness in terms of innovativeness. The discussion revealed that some late adopters showed resistance to change.

I don't like change very much. So, to justify the change, there has to be a significant benefit ...I kind of loathe to change.

Do I really want to go through the trouble of upgrades and learning and all of that??

The change—the constant change can be frustrating, definitely.

Theme 6: strategic behaviour of late adopters. The focus group discussions indicated that resistant behaviour was a strategic economic choice.

...I tend not to ride the crest of the wave, because that's usually the most expensive place to jump in. With TVs, I've seen lots of people buy \$10,000 dollar screens and can pick them up in a garage sale five years later for fifty bucks or sixty bucks.

More than one member noted that if they waited, they could get an upgraded phone.

Soon I'm going to have [to] ...work through all my, what do they call that? Your credits. So you get an...hardware upgrade for basically free.

Their actions were a strategic and could be considered a leapfrog adoption, where they adopt the next iteration earlier in the product life cycle.

For me it would be, it's broken [smartphone], so time for a new one..., I would go with the latest and greatest, because it's ...the other ones weren't available anymore ...[laughing]... No, well.. you know.. I mean you do want to experience and explore the conveniences, the novelest and the benefits.” (when asked what influences innovation adoption).

Chapter 5: Discussion

The focus groups with late adopters revealed some interesting behaviours and attitudes toward innovation. The ownership of smartphones, tablets or wearables was the selection criteria for the focus group members. Smartphones dominated most of both discussions, as every member owned one. Some members voiced their resistance to change with specific reasons that indicated they had little interest in technology. The majority of participants used basic features of their technology, in this case their smartphones. All of the participants stated they did not use, nor understand or value certain features of their smartphones. Specifically, Apps were a feature of smartphones that were dismissed as novelty; or not important enough to warrant research and trial. The discussion indicated that the group members were not fully satisfied with their technology, their smartphone in this case, and had not fully adopted the features.

The complex business model of smartphones manufacturers and the service providers was the source of some scepticism from a few participants. In addition, there was a concern of surveillance of their online technology (computers and smartphones) activity.

Certain members detailed that new technology did not dramatically improve the member experience or provide significant utility over the previous innovation, mobile phones with limited or no Internet access in this case. The discussions did reveal strategic behaviour around innovation adoption, indicating pragmatic reasons for innovation resistance or adoption.

No Appetite for Apps

Smartphone applications were, surprisingly, dismissed by every participant. They were considered a novelty, with little apparent benefits. “Yeah for me the novelty wears off...why would I ever want that”? Apple’s App Store grossed over \$20 billion from App sales in 2015 (Keizer, 2015). This shows that Apps are a significant feature of smartphones that the late

adopters may dismiss. It would seem important to further examine why late adopters mostly ignore the App market, given this reluctant adoption behaviour found in this study,

Resistance to Change

A resistance to change trait was voiced during the meetings. "...I kind of loathe to change." Overall a disinterest in *gadgets*; limited time to commit to learning to use the innovation; and lack of deep technology proficiency were presented in each group. "...I'm not gadget oriented." Rogers (2003) describes laggards/late adopters as *traditionalists*. There were many cases in the data where the added benefits and novelty of technology were just not important to participants. They all used the text and calling features of smartphones. However, much of their usage could have done on the previous generation of mobile phones. Studies support the idea of this type of resistance to the change offered by smartphone technology as just being a case of not trying the innovation's new features (Nabih, Bloem & Poiesz, 1997; Szmigin & Foxall, 1989). The aforementioned lack of interest in Apps points to this conclusion. In addition, it can be argued that once a consumer is satisfied with their current situation, there is little reason to change (Foxall, 1993/1994). Some members of the groups indicated they waited until their current technology broke before they adopted. Other members adopted when strongly encouraged by their family or the technology was given to them; as a gift or an employer-assigned device. Many of these behaviours would support Rogers' (2003) traditionalist characteristic of laggards/late adopters.

Barriers due to System Structure

System suspicion. Much of the discussion around change was not about the innovation itself, but the business infrastructure or *system* surrounding the innovation. Proprietary software, planned obsolescence and invasion of privacy were all mentioned during the sessions. Members

alluded to manipulation by the manufacturers and service providers to get consumers to buy the latest iteration. Also they noted their online activity was being monitored in order to target them with marketing messages. Their points were strongly worded; “I’m not a conspiracy theorist, but sometimes I feel like we’re just being led down the path” “ Another reason I think some people are reluctant with new technologies. The idea that you’re being watched a lot”. This all points to *system blame* (Rogers, 2003), where it is not the innovation, but the system surrounding that causes resistance to adoption. In this perspective, *scepticism* (Rogers, 2003) or manipulation is perhaps a logical reaction, not a characteristic specific to late adopters.

System Complexity. The focus group discussions delved into the service provider contracts, third party Apps and the equipment manufacturers, all separate entities whose success is tied to the smartphone hardware. Smartphones are a part of a more complex business model. Future research could examine the system components surrounding the innovation. For example, to what extent does the nature of a mobile service contract determine what specific smartphone is adopted? Late adopters might be the best population for this future research as their perception of the innovation’s characteristics and complex situational factors affect resistance (Ram, 1987).

System Agents. Research supports the notion that it is the actions of the change agents that create resistance (Ford et al., 1998). That research proposed “overcoming resistance” (p. 372) through managing the agent-adopter relationship. Ford et al. mention *violation of trust* by change agents. For example, smartphone service providers could build trust with subscribers by automatically applying any subscription reductions to mobile service plans they are entitled to. Currently, some providers continue to charge a higher rate until the user notices and contacts the company to request the reduced rate. These system issues are important as they may have impact on the resistance to adoption. This observation is probably not specific to later adopters, however

future research may indicate that later adopters have a different insight on complex system structures.

Strategic Behaviour

“Consumers (who) often worry that by investing too early in ... innovations, they are at risk of rapid introductions of new and improved versions leaving them with obsolete equipment” (Kleijen et al., 2009, p. 347). One member explicitly noted: “...they are coming up with a new one every year and so should I just wait till the next one comes out... and that's going to be better.” Product life cycle management strategy (Dean, 1950; Kotler & Keller, 2014) results in innovation price reduction and improved competitive offerings over time. This supports that delayed behaviour may be a strategic choice to get the best price and a better product to meet their needs. Although late adopters are minimal economic contributor to companies, their strategic delay may be an indication of systemic issues. This seems logical given that they delay longer than other adopters and may be able to identify more barriers than less resistant early adopters. Symigin & Foxall (1998) claim that consumers often postpone their innovation decisions until they have more information about the innovation. Again this points to examining the reasons for delayed adoption, rather than methods to accelerate adoption (Midgley & Dowling, 1993).

Future Innovation of Diffusion Research

The *diffusion of innovations* is an area of study that warrants further examination. The focus group participants in this study all have smartphones. So, from an economical point-of-view, the innovation is well diffused. A late adopter may be considered an adopter in terms of their economic impact on the market, but maybe more likely to partially adopt the innovation and its features. For example, having a smartphone to make phone calls is distinctly different from

editing movie clips on that smartphone. The discussions in this research were clear that Apps are a feature mostly left orphaned. “I find myself getting rid of Apps on my phone quite often.” “I have to say that I use very few Apps.” Further examination into the level of usage, or feature usage for all adopters of an innovation may elucidate a deeper understanding of innovation diffusion and provide future researchers with a well-defined term.

Much of the research and this study points to the *Resistance to Change* (RTC) construct (Oreg, 2003). Perhaps Shaul Oreg’s predictive RTC construct should be examined in the context of new product development. He concludes that “consumers’ resistance to try new products is considered a significant obstacle for most companies that attempt to introduce new products” (p. 681) and warrants further study. It would seem sensible to examine the RTC construct in relation to new consumer technology and its supporting infrastructure. This comparison type of study may have important implications regarding adoption and whether resistance is a result of innate characteristics or caused by domain-specific attributes, or both.

Limitations

Focus groups, as with any research method, have certain limitations. Focus groups purposely select a small, convenience sample of a population. This study endeavoured to compare the two focus groups for similarities and differences in the behaviour around innovation adoption. The researcher mostly found similarity between the groups and a high level of consensus within each group. Given the number of participants of both groups was small for focus groups, this research should be replicated with additional focus groups to see if similar results are found.

The focus group data was subject to a traditional content analysis method (Krueger, 1994; Strauss & Corbin, 2007). The coding, however, did not undergo any independent cross-validation by experienced coders, which would be recommended for future research,

The acquisition source of the innovation may play a role in research. It is important to note in this study that, in some cases, the adopted innovations were either a gift or required from an employer. It is interesting to note that for those members where the smartphone was a gift or employer-required, they indicated using minimal features or those used the features mandated by their employer. This, arguably, is not adoption by choice. The individual is likely to remain with the status quo (Szmigin & Foxall, 1998) if given their choice. Consequently, future research could look at the segregate data for innovations *freely-adopted*, received as a *gift* or *employer-assigned*.

Late adopters for this study were neither easy to find or have participate in the focus group. It is possible that the researcher's network did not reach this specified audience in the time allocated for recruitment. Recruitment resistance may have been the result of the stigma attached to the *holdout* characterisation used to recruit participants. Initially thought to be better than the laggard term, *holdouts* also implied a purposeful attribute that the more temporal *late adopter* term did not. Regardless, the study did not recruit the planned number of participants. Also, casting a wider net using the *late majority* moniker to include adoption in the last three to four years may have resulted in more potential candidates. A wider scope may be more likely to attain data saturation; uncover other latent behaviours; and built a deeper understanding of late adopters.

Conclusion

Although some of Rogers' adopter characteristics were evident in the discussion, this research suggests that the innovation should be the discussion focus in regard to future studies of the late adopter population. The results would seem to indicate mostly pragmatic behaviour in late adopters, a theoretical characteristic also attributed to the later majority (Rogers, 2003). Systemic issues were apparent and may affect adoption. Marketing studies should still consider research including the late majority with the late adopters, as together they represent about half of the adoption market that may react more pragmatically than earlier adopters.

Understanding late majority and late adopter resistant behaviours become even more important when adoption is crucial for a social system, such as in healthcare. Healthcare often requires complete compliance in the case of debilitating diseases. An adoption rate 90-95% is required to vaccinate against diseases such as tuberculosis (Katz & Hinman, 2004). It would be beneficial if research can identify the reasons for any delayed adoption by examining late adopters, the most resistant group.

Early adopters may be strategically beneficial to a business (Moore, 1999), however may offer little economic value if they dismiss the innovation later on. Early adopters do not determine if a product will be successful, they just start the diffusion process (Rogers, 2003). If, however, early adopters dismiss the innovations, the more socially-connected early majority may never be made aware of it, halting diffusion (Moore, 1999). Late adopters may be a good research sample since innovation adoption is delayed the most, possibly due to more barriers identified than early adopters. This is especially important in the case where full adoption is critical, such as medicinal diffusion.

In the end, researchers and practitioners should focus on the innovation itself, not the individual. The research presented in this paper supports the notion that innovation adoption is complex, complicated by the innovation domain (Goldsmith & Foxall, 2003) and situational factors (Symigin & Foxall, 1998). Consequently, attributing late adoption to latent characteristics doesn't make intuitive sense. The adopter category characteristics outlined in marketing literature are relative, specific to the innovation under study. There is no absolute data that specifies adopters, only theoretical. Research should focus on the antecedents that decelerate diffusion (Kleijnen, Lee & Wetzels, 2009). For example, marketers could employ usage studies on prototypes of the innovation, which may uncover eventual barriers to adoption. In any case this calls for diffusion research to be applied from the perspective of the innovation, and not focus on the traits of the individual. Late adopters and the late majority seem like a logical population to start by virtue of their more resistance and pragmatic reasons for adoption delay. However, research must not just focus on one or two categories. This doesn't provide a complete picture in regard to innovation diffusion. Early research has already spent too much effort on the early categories (Rogers, 2003). Future research should not swing the pendulum the other way. The findings from this study indicate focusing research from the adopter's evaluation of the innovation, not the evaluation of the adopter. Therefore, all categories should be examined, whether early or late to the show.

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Appendix A

Information Letter and Consent Form

Discovering the reasons why people hesitate to adopt new technology.

Research Investigator:

James Sprenger
1301 16Ave NW
SAIT
Calgary, AB, T2M 0L4
sprenger@ualberta.ca
(403) 399-4247

Supervisor:

Dr. Stanley Varnhagen
10230-Jasper Ave
University of Alberta
Edmonton, AB, T5J 4P6
stanley.varnhagen@ualberta.ca
(780) 492-3641

Background

- You are being asked to be in this study because you hesitate to adopt new technology. What I mean is you chose to wait to buy new technology, such as a smartphone, tablet or wearable. I am interested in why you waited.
- I got your information from (Third Party Method/Name – This may change based on recruitment method) who said you usually wait to buy new technology.
- The results of this study will be used in support of my capping project for my Masters of Communication and Technology for the University of Alberta

Purpose

There are all sorts of reasons why people wait to buy new innovative products. I would like to provide more information to the research community to why people hesitate to adopt new technology and to possibly support the need for further research. Your participation will add to this field of knowledge. In short, you'll reveal why hold-outs wait to adopt innovative new products.

Study_Procedures

- You were selected by either someone else recommending you or through a Facebook recruitment ad.
- The focus group will be made up of people like you. They all hesitated to get new technology. I will have an informal conversation with the group to discuss why you and your focus group members waited to adopt new technology.
- If you choose to participate
 - I will only record your name for the informed consent form
 - I will have your email address, if you choose, to communicate with you before the focus group
 - You have a choice to participate in one of two focus group interviews
 - Each focus group will consist of 4-8 participants
 - Each focus group will last approximately 90 minutes
 - Your responses will be audio recorded
 - My assistant will observe the interview and record information about consensus and dissent to questions from each group member
 - I will create a transcript of the recording to analyze

- I will not transcribe your name or occupation or any obvious information that would compromise your identity
- I will create project findings for my capping project at the University of Alberta
- I will create a summary of that report for your review if you want

Benefits

- There are no direct benefits to you other than adding your voice to the information about hold-out behaviour.
- You can get a summary of my findings by contacting me after September 30, 2016
- I hope that the information I get from doing this study will help better understand why hold-outs wait to adopt new innovations.

Risk

- There is no reasonable foreseeable risks to your participation in the focus group.

Voluntary Participation

- You are under no obligation to participate in this study. The participation is completely voluntary.
- If you choose to participate you are not required to answer any of the questions.
- A signed informed consent form and full participation in the focus group indicates informed consent.
- Focus groups are interactive by nature and their format limits being able to accurately identify participants. Therefore, it is not possible to remove your data from the research if you participate in the focus group.
- You are free to leave the focus group at anytime. Data up to that time will be included in the research.

Confidentiality & Anonymity

- You will not be identified by your responses
- Your consent form, the recordings and transcript will be kept confidential.
- It is a shared responsibility of all focus group members and the researcher to conserve confidentiality.
- Please do not share with anyone what was discussed at, and who attended, the focus group.
- The focus group participants will be instructed to not discuss the content of the focus group. However this cannot be guaranteed and your confidentiality and anonymity is not completely protected.
- Any email communication and your email will be deleted from the computer immediately following the focus group. This will be indicated by my final email of thanks. Future email communication is at your prerogative.
- Any email communication before the focus group is kept on a password protected email server administered by the University of Alberta. No information about your data from the focus group will be documented through email.
- Only my research supervisor and I will have access to the focus group data.
- I may use the data I get from this study in future research, but if I do this it will have to be approved by a Research Ethics Board.

Further Information

- If you have any further questions regarding this study, please do not hesitate to contact me or my supervisor.

The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

Consent Statement

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and will receive a copy of this consent form. I will receive a copy of this consent form after I sign it.

Participant's Name (printed) and Signature

Date

James Sprenger

Name (printed) and Signature of Person Obtaining Consent

Date

Appendix B

Discussion Guide for Late Adopter Focus Groups

The following discussion guide provides a semi-structured question route to elicit the reasons for late adoption behavior described by self-identified late adopters.

<p>Welcome Script [2 min]: Thank you for participating in this focus group. I am grateful for your valuable time.</p> <p>Over the next 90 minutes, give or take, we will explore the reasons for your late technology adoption. You have all been identified as hold-outs, people who wait before committing to new innovations. This study is specific to smartphones, tablets and wearables. Your participation is crucial to this research and all and any comments are encouraged. I want to hear you point-of-view whether or not you agree with the person beside you. In any case, your information will add to the body of knowledge regarding hold-out behavior. This should be fun!</p> <p>This focus group is being audio recorded and observed by my research assistant, Debbie, who will be taking notes.</p>		
Warm-Up Questions [15 minutes]	Probes	Type
<p>1. Please tell us a bit about a hobby or passion you participate in when not attending focus groups.</p> <p>2. Can you tell me about your overall experience to date with new technology? For the sake of clarity a smartphone is considered any mobile phone with a touch screen, access to the internet and can run third-party applications. Smartphones include, but are not limited to the iPhone, the Samsung Galaxy and other phones using the Android operating system. Tablets include the iPad and Samsung Galaxy Tab or Google Nexus that run Android operating system. Wearables include, but are not limited to, the Apple Watch, The Fitbit, The Pebble. These wearables may or may not work in conjunction with the smartphone.</p>	<p>Facilitator can go first to break the ice. No probes required. Trying to build a relationship among group members</p> <p>Answer will vary. Ask why their experience is the way it is.</p>	<p>Conversational question. Humor to encourage open conversation and not focusing on work, but rather interests. Easy</p> <p>Tougher. This question get them ready to think deeper and prepares them for questions about their adoption behavior. Look for consensus.</p>

Relative Advantage Questions [20 min]	Probes	Type
<p>1. What feature of new technology, such as a smartphone, tablet or wearable, do you think is used by most people on a daily basis?</p> <p>2. What is the benefit of the new technology compared to how things were done before?</p> <p>3. Did you discover any new advantages of the new technology after you acquired it?</p> <p>4. Are there any features of the new technology that have little or no benefit</p>	<p>Probe for technology specific features and the benefits of those features.</p> <p>Probe for economic, social status reasons. Is that advantage significant or trivial? Why?</p> <p>Probe for economic, social status reasons. Is that advantage significant or trivial? Why?</p> <p>Probe for reasons why there is little benefit</p>	<p>Easier. This question may show lack of relative advantage over previous solution.</p> <p>Harder. Give the members time. Use the whole group rather than focusing on the first response.</p> <p>Harder. Give the members time. You may need to focus on the first response as you may not get many answers.</p> <p>Harder. They are giving their reasons why they don't like the features. Personal even though worded in general</p>

Reasons for late adoption [20 min]	Probes	Type
<p>1. Why do people hesitate before buying new technology?</p>	<p>Be sensitive. Probe into the reasons “why” the reason is a contributing factors. Were there any other reasons?</p>	<p>Really hard. This goes to their personal reasons for late adoption. The group must be warmed up before this question is asked.</p>
Compatibility Questions [10 min]	Probes	Type
<p>1. How does new technology fits into your life(style)?</p>	<p>Probe to needs, sociocultural values and beliefs or previous held ideas (used a cell phone for the same reasons). Probe to why their reasons are important to them.</p>	<p>Harder. This question goes to deeper held reasons for smartphone attitudes.</p>
Complexity question [10 min]	Probe	Type
<p>1. Is new technology easy to use?</p>	<p>Probe for areas that were easy or difficult to navigate or comprehend.</p>	<p>Easier. This question should allow for a lot of discussion. Try to focus on generic issues, rather than brand specific ones</p>

Influences Question [15 min]		
<p>What or who influences the purchase of a new technology?</p> <p>Can you be more specific of those influences or think of other influences?</p> <p>(Alternate) Is there any other factor that might influence a hold-out adopter?</p>	<p>Probe into why or what way they were pivotal? (Financial, tech-savvy, trusted).</p> <p>Probe for why that description is important?</p> <p>Probe into source of that factor/message?</p>	<p>Opinion leadership may come up here.</p> <p>This may bring up interesting commentary.</p> <p>May be important to identifying “triggers” to accelerate adoption.</p>
<p>Well that wraps things up. Thanks again for your participation. Feel free to grab any leftover snacks (note soft snacks such as gummy bears – reduce ambient noise for recording). If you have any questions or concerns, feel free to contact me at the number provided on your copy of the consent form. Take care.</p> <p>(Answer any questions of people who may linger after the meeting. Provide exit instructions)</p>		

Appendix C

Focus Group Transcripts

This appendix includes two focus groups interviews conducted in Calgary, Alberta on August 3 and 7, 2016. The participants for each group are self-identified late adopters of smart phones and/or tablets and/or wearables. FGMA indicates a comment by a member of the first focus group and FGMB the second focus group.

Focus Group 1 August 3_2016

Moderator: So, can you tell me a little bit about your overall experience to date with new technology?

FGMA: I don't really have a lot of technology at my home. I have a phone that was given to me by my mom, because it was cheap. And that's all I think about, when I think about phones. It's just something that will allow me to make a phone call or get important phone calls, and that's about it. At home, I have a small TV and my laptop and that's about it. It's—my life has never really revolved around a lot of technology.

FGMA: For me, technology, more related to music again. I like to have a good stereo system. It's not necessarily TVs, but really good sound system is important to us. Technology as it relates to music, different pedals and instruments that you can use with the guitars or with music in general. In terms of telephones, again for me, technology is not really a focus or something I spend hours researching or surfing the net looking for the latest and the greatest gadget. I tend not to ride the crest of the wave, because that's usually the most expensive place to jump in. With TVs, I've seen lots of people buy \$10,000 dollar screens and can pick them up in a garage sale five years later for \$50 bucks or \$60 bucks. Some of it has to do with the cost as well. But, technology is—for there when we need it, from my point of view. My last phone was a flip phone and my kids shamed me into a—I have—now I have a 4S. So, yeah, don't need to ride the technology wave.

Moderator: I want to explore with you quickly, you said that your life doesn't really revolve around technology. I want to explore what you mean by doesn't revolve.

FGMA: Like for example, my TV at home, I have been in my new home for two and a half years now. I have yet to actually watch TV on it. Like I watch Netflix once in awhile, but I don't really use it for anything else. My phone doesn't really have any upgrades, nothing. I basically just use it to call my parents or make any other vital phone calls, and that's about it. I don't really use technology for anything else.

FGMA: [INAUDIBLE]

Moderator: And again, just to keep the question clear, I'm asking about your overall experience with technology to date, with new technology.

FGMA: I do interact with technology, like at work; we were very quickly at work onto smartphones. So, at the place that I work, we were given smartphones about 10 years ago, and it's in the early stages. So, I don't find it a necessity, and I—we do have technology in our home, that we only have one TV. I don't—I see the utility of it, but I don't feel like the attraction of the latest technology or like when we had the Blackberry's at work, we used them to check email, but I wasn't—I'm not really into downloading apps or even as I got my latest phone, you had a choice between iPhone 5 and iPhone 6, and I just went for whatever the simplest was. So, I see it as a useful thing, but I don't see it as something super attractive that I want to have the latest thing. It's more like, if it's something that can be useful to me, and then I might be interested in it. Otherwise, I could really care less.

Moderator: So, again, revolving around the concepts of, does anyone own a tablet here? Just wondering. No?

FGMA: No, me either.

Moderator: And you have a tablet. But the consensus is, utilitarian at this point, I kind of heard that you're saying, you use it for what you need it for and you don't—

FGMA: For me, I don't—I have my laptop, so I would—is it the same kind of use that you would get from it, maybe? I don't know. I just don't see—

FGMA: Well, my tablet often dies, and I don't charge it for—I think it died about a week ago, and I haven't charged it. So, it's kind of like, maybe if I'm going to go somewhere and I think, I'd like to have the iPad with me because, I don't know, we're going on a trip and so it's nice to have the iPad for different things to be able to search the Internet looking for stuff. But I don't add—I can easily not charge my iPad or just leave my phone off for hours and I wouldn't care.

Moderator: We're going to—we'll move on to kind of the next questions that I have going here. And any particular order, we won't continue making you speak first. What feature of new technology, such as a smartphone, or a tablet, or a wearable, any of those three, do you think is most used—is used by most people on a daily basis? What feature do you think is used most often on those products?

FGMA: By us personally or by other people?

Moderator: Could be personally or what you're observing?

FGMA: [CROSSTALK] use the most.

Moderator: It's not specific.

FGMA: I would say Facebook is a big one for observing my family. I don't have a Facebook presence but everybody else in my family does. And so, I see a lot of that with the technology. Really social interaction with their friends, whether it's Facebook, Twitter—or not so much twitter, but Instagram, things like that. And personally, now that I have a smartphone, just seeing some of the things that it's capable of, I start to use it more. And GPS, probably. Because we're on the road quite a bit, so I find the GPS very useful. Better than our onboard GPS in the vehicle. And more up to date.

FGMA: I think nowadays, I see everyone playing games on their phones. So, a lot of people are using them—

FGMA: Pokemon.

FGMA: --for that, or other games or for other types of social networking, online dating, things like that. I see lots of people doing that all the time. So, I think there are a lot of new uses that weren't there five years ago or 10 years ago.

FGMA: So, what came to my mind immediately was the phone, when you said, how do you see people using it? Texting and phoning. And it seems like texting is almost really replacing the way of communicating, using those devices, as opposed to actually just picking up the phone and calling someone. And even recently, I went to a get together, and there were some teenagers. And I went down to the basement where they all were, and they were all splayed across the floor, texting each other, in the same room, which I thought was kind of crazy, but that's not my generation, I guess. But it seems to me like texting like teenagers, and my nieces and stuff, it's text, text, and text. They could spend hours on texting as the communication.

FGMA: Yeah, I agree with that, actually more so than Facebook is texting. Definitely, yeah.

FGMA: Yeah.

Moderator: What do you think are the benefits of those features? The three of you said texting would be one element of smartphones and telephones in general, or mobile phones in general. There's an advantage. What's the benefit that you see to texting or that you see for other people?

FGMA: Well, it's instantaneous, right? So the benefit is—and this is also a negative, which is one of the reasons I sometimes don't like technology is you can be in contact anywhere, anytime, right? That has really changed with technology. So, that's good, because you could work remotely. You don't have to be in the office, to be in the office. You can find your kids, right? Like you know they can be in touch with you. Like I remember being a teenager and having to find a way to phone home to say I'm going to be late. So, now it's really easy to stay in touch with people through text or to get like a very quick answer. Like, do you want to grab lunch? If that person wasn't sitting at a phone, you can do that before, so that is a benefit. But it's also the same thing as a drawback, which is there's an expectation of being available all the time, right? Because, why didn't you answer my text, it was three hours ago.

FGMA: I agree with that too. The biggest benefit, I think for me, is being able to find out where my kids are at any given moment. And if they're not showing up at midnight or 2AM, then I can text them and I usually get an answer right away. "It's OK. We're at so and so's house. Everything's good."

FGMA: Yeah, I agree.

FGMA: I'm not sure they agree, that's a benefit, but.

Moderator: So, I mean, you may have answered this, but digging a little deeper, what do you believe the benefit of new technology, and you can pick any of the three again, download to the phone or wearables for that matter. And if you need any clarification of any of these products, as me, and I can show you and/or tell you. What are the benefits—so the benefit of this new technology compared to how things used to be done before those technologies existed.

FGMA: I think the benefit, like you were saying before, there's benefits but it kind of also, they're negative as well in that they're right there at—readily available. You don't have to really get up to go watch TV in the living room. You can bring your tablet or your laptop and watch Netflix all night right, comfortably from your bed, or text whoever you want from the comfort of your bed. It's just very convenient, but in a lot of other ways, we're not moving as much. We're maybe more sedentary because of that. But I think it's just convenience, it's just right there. That's what—it's the benefit of it. It's available.

FGMA: I just recently got a Fitbit for my birthday and that is a bit of a motivator for me to do something. I'm active as it is, but it's nice to be able to monitor heart rate and things like that and exercising. And it's nice to know how far you've gone or what speed you've come down a mountain on. Skiing as well, some of the apps that are available, if you're on the mountain skiing. It's a benefit, but it's more a toy, I think, in that regard. I'm not really concerned about how fast

I get down the mountain, but it's interesting at the end of the day to look at that. So, I think from a fitness point of view, some of the new technologies beneficial.

FGMA: I'd say, like for me, it kind of changed the way that I work. Because before, there used to be a lot of obligation to be in the office. And now there's a lot of ability to be in other places and to be doing work or to be in contact with people. And even to have information at your fingertips, if I go to a meeting, I typically—I don't bring a tablet to work, but I see people that do that. So, I want to kind of speak on what I see from them doing, but they can have documents at their fingertips. And I know, for example, that our company, the board has gone entirely to iPad. So they used to have these huge board binders that somebody used to have to prepare like 25 room board binders, or hundreds of pages every quarter, and now they do everything on iPad. And they just go to the meeting with the iPad, and they can call up meetings of past minutes. So, the idea of being able to recall information right at your fingertips very readily has changed the way people work. Way less paper intensive. The information's available. You have search functions, so you're like I remember somebody saying this, you can search a word, and it's there. So, in that way it has, in some ways, promoted efficiency. Or in many ways it promotes efficiency. But again, at the same time what I feel is that then there's things that become so efficient, I think people actually work harder because of it, because now that you can do so many—something which would've taken you a week to do, can take you a day because of this technology now. Well, now you've got to just pile that many more things into the week. So, it does make people work—more volume of work because of the efficiency of it. That's the good and the bad. But certainly if you're in that kind of situation and you can just call something up, it is—I mean it's changed, for research it's changed things. Like for us, for legal research, being able to have that right there, it's great. And email, sorry now I'm going off—but email too is like an amazing means of communication. People used to have to type out letters and fax them and even in our legal contracts, used to have all these clauses where I'm delivery—like delivery would be deemed five days after the registered mail. Now you just click, I know you got this, now I delivered you my notice. So in that way, it has created a lot of efficiency, in the workplace I would say particularly, though maybe the flipside is now we're all doing more work.

Moderator: **My next question revolves again around advantages. Is there—basically new technology that you've—your newest technology that you've attained, did you discover any new advantages of that new technology after you acquired it?**

FGMA: Like something you didn't anticipate when you purchased it?

Moderator: Yeah, it would be an advantage to you or not an advantage, but either way, something you didn't expect from that, from the technology.

FGMA: Something positive.

Moderator: It doesn't have to be necessarily about the technology itself, it could be the experience or however you want to—

FGMA: Well, I wake myself up, an alarm clock, does that count?

Moderator: That counts.

FGMA: So, I no longer worry about having an alarm clock, because I just use my phone. So—

FGMA: I would say back to the GPS, I was surprised that it's so much more efficient than the other GPS's that I've had, I used to use. Just Google Maps to find a place and then sort of get there on my own. I actually kind of can navigate with it. I was quite impressed with the capabilities and how accurate it was.

FGMA: I didn't really purchase it, but I recently got a new security system, and I know a lot of the new ones have the added value with the smartphone that you can control everything and anything from your smartphone, your heat. You can alarm or dis-alarm. You can do so many things. You can watch people that come to your door, all of those things right from your phone. So, I thought that was definite—more than I ever—like the one that my parents have, it's just a regular old—just the keypad. Whereas now it's all with cameras and smartphones and stuff like that. So, I thought that was pretty neat.

FGMA: I thought of something else that's major for me. The photos, actually. Again, it's a plus and a negative, because I don't print photos anymore, but I never really thought of the idea, but when the kids are just—you know you're doing something and there's something really cute, you don't have to have a camera. You always have a camera on you—

FGMA: Exactly.

FGMA: --just capture a moment and you have that. You can send it to people and share and it's really nice for sharing with family. You don't have to print it, you can just send it and be like, hey check out the kids are doing something new. So, I guess before, I had a BlackBerry for a long, long time. That's what they give us at work. So, last year, I moved to an iPhone. And with the BlackBerry, you couldn't really take photos, we didn't have apps, they blocked us from apps at work. So, that's something really big. Like I take a lot

of pictures and share them, look through them and my kids like looking through them.

FGMA: Yeah.

FGMA: And I'm surprised by the quality of the pictures as well. I mean, the convenience and the quality is more than I expected as well.

Moderator: Back again to your newest technology or the technology that we're discussing tonight. Are there any features of the new technology that you have little or no benefit for you?

FGMA: Most of the apps, I don't care about most of the—I don't care about the apps really. New apps or games apps or—like the availability of thousands and thousands of apps. I have like—other than the apps that came with the phone, I think I have downloaded two apps.

Moderator: Why do you think you don't have value for apps?

FGMA: I don't see that as a function of the technology, I guess, or it doesn't appeal to me. Like I primarily see the iPhone as a phone, so that's my main reason for having it, phone and email. And so beyond that, I don't find that useful. And I don't know, I feel like if I want to look something up, I'll just go on the Internet and look it up. I really, really want to. I don't know, and games don't really—some games. I have downloaded Boggle before. But, I usually end up deleting them. But I find the apps are kind of gimmicky. In the beginning, it seems super useful and you're like, this is a really cool app. Like I downloaded that Vivino app, and I'm like, I'm going to photograph all this wine and what I end up doing is actually just going into notes and if I like a wine, I just put it in the note. I don't know, I just—I think they feel good, but then they just—in the beginning it's like a gimmick. And then after awhile, they just aren't really useful, for me.

FGMA: For me, the phone—the games on my phone, there's a number of icons I've never even touched on my screen. I'll never even know maybe half of what's there. But the games, I've never looked at the games on it. My kids probably have when I'm not around.

Moderator: Why do you think it is that you haven't touched the icons on your phone?

FGMA: I've seen nothing that I needed to—I've never spent enough time to look at the phone, other than when I need to use it. Or if there's an app that I've heard about that I think sounds cool, I'll download that. My brother in law told me about an app if you're—we're out camping a lot, so we see the sky a lot, and there's an app for, if a satellite's going, we can open this and it will

tell you which satellite it is, who launched it, those sorts of things. So, that kind of technology is fun. But, yeah, some of the apps, I don't recognize what they are and I haven't clicked on them to find out what they are, because I don't spend that time looking at my phone – other than when I have a function, a purposeful function to look at it.

FGMA: Yeah, I would have to agree. There's nothing that I've seen that is not useful. But I haven't really looked for anything else. I haven't really gone through my phone and seen maybe other things that it can do or more apps that I can download. I just kind of use what's there, and that's it. I haven't really, whether maybe I don't have the time or the interest, or a combination of both. I just haven't looked at what else I could be doing with my phone.

Moderator: Here's this question is moving into, about adoption. And something you want to think about before we answer. Why do you think people hesitate before buying new technology? And what I mean by hesitate, you all self identified as late adopters or hold outs. Apparently, there was a reason why you or other people hesitate. And it could be either.

FGMA: I think it comes down, for me, necessity is the mother of invention. If there's something I need, then I'll go looking for it. But I'm not going to search out new things for the sake of searching out new things in terms of technology.

FGMA: I think also there's a cost associated with it. And so there's sort of the value proposition, like am I going to go and spend this money? When other people use it, it sort of gets proven and then you can see what other people are using it, if that's something that's valuable to your not. And you can make the decision by seeing something play out. And I think that's my approach to things with technology. Like I think back to MP3s, they said that was going to be the new thing, and then it sort of played out, no pun intended. And it wasn't really. So, part of it is, I don't really care about being able to have the new hype. Like say, "Oh look I got an iWatch." And everyone—it's all cool and all that stuff. That doesn't appeal to me. There isn't that appeal. There's usually a high cost involved with it. And generally, I like to see how it plays out, before I decide, is this something that's going to affect my life for the positive. I also find, personally though, I use technology. I find in some ways it's—not intrusive, but sort of a detractor to many things, so I'm not always that crazy to go and get something new technological. Like when I saw those kids laying on the basement floor, I actually felt sad. Because I thought about my teenage years and if I'd—what kids would've done then. And I'm not saying all kids does that, but there's a lot more of that now. And I just thought, so to me, in some ways, I feel like technology is taking away from the human contact with each other. It's like replacing it. Like you don't have to be with someone and have a conversation, you can just text.

FGMA: I think some of the new technology too, spell check for example, you don't have to think as much with some of it. I'm just thinking back to when we used to type letters, you were very, very careful of your typing a document, that you don't make any mistakes, because it's a major hassle to go back and try to correct it or retype it all. Whereas now, you can sort of fly on and type and there's a few errors in it, you go back and correct them. So, a little less due diligence in some cases, I think [INAUDIBLE]. So maybe thinking less about what you're doing.

FGMA: I think to me, it's also a cost associated. And just how complicated it seems. I want the latest iPhone, but I have to camp outside of the store two hours—or two days before to get the first ones. It just seems very unreasonable to me. It's like, I'm not going to go through that to get the latest iPhone. And then two years later, I'm still with the same old phone. Just—I just forget about it. And I think, yeah, that's probably cool to have the iWatch or a tablet or something else, but I just—it's maybe too high of a cost and it's not a priority for me, by any means.

Moderator: And what—and when you say priority, priority in what sense?

FGMA: In the sense that, do I really—and can I get through with the phone that I have, or do I see a need or that—yeah, that need to have the other iPhone with other apps or other features. So, that to me is not a priority to me. Like we've said before, the phone is so I can get an important phone call, maybe text. Keep in touch with family that's abroad. And that's about it. So, I don't see it as that maybe other people see it as a priority in terms of maybe their work. They need that technology to do their work more effectively. But for me, I think, it's not a priority.

Moderator: All right, and some—we're going to be revisiting some of this same territory for some of these questions, but just for complete list, I wanted to go to this next question. How does new technology fit into your lifestyle? And it could be any of the technology, whether it's the wearable or the tablet or the phone.

FGMA: Well, in terms of lifestyle, I think the Fitbit that I just got is, again, it's maybe more of a toy than a necessity and it was a gift. It was something that I felt the need to go out and purchase. But it was interesting to know what my heart rate is at any given time. And again, how far I've run or walked, if I got my 10,000 steps in or not, or 15,000 or whatever the case might be. Sorry, what was the question?

Moderator: The question was, how do you feel that—sorry, I'll specifically say it. How does new technology fit into your lifestyle, if it does?

- FGMA: To me, it doesn't maybe. I've now, through this, noticed that it—I have whatever I need to get through. I need a laptop so I can do work, get on the Internet, do things that I need to do there. A phone to stay communicated. A TV to—for some entertainment purposes, and that's about it. That's the extent of the technology that is in my life.
- FGMA: For me, definitely for work, to stay in contact for work. And generally, I think new technology, I might be interested—when I think about the things I'm interested in, if it solves a problem of some kind, right, like if there were like an app that I had downloaded like Park Plus. Like it's all a big pain in the butt, you get there, you got to stand outside with your credit card or have coins. But now, you can be in your car, look at the zone, you got to remember the zone. [INAUDIBLE] sometimes you get half down the block, and you're like, "oh crap, I forgot the zone." Right. You can just sit there and charge it. I would say the way it fits for me is if it's addressing something and making it easier. And not everything has to be easier, because some things, it really doesn't make much of a difference, but I'm interested in that. I'm interested now, and this isn't on the phone or anything like that, but like Superstore where you can order your groceries online and pick them. So, that's really making—solving a problem for me which is trying to get to the grocery store with two small kids and fitting that into my life. So, that's how it fits for me, if it's making some—solving some kind of problem that I have. Or making something, so that I can free my time to do something else. It doesn't fit for me if it takes more time. It fits for me if it's freeing up other time to do other things.
- FGMA: No, work is a good point. I find the email really useful if I'm on holidays. I used to just stay away from the phone for two weeks and come back and there's a lot of fires to put out when you get back to the office. Now, I can deal with most of the stuff, I just have to spend maybe an hour each morning on work related issues. And I can be in touch with the office and get everything resolved and when I get back, there's no fires to put out. So, it works really well from that perspective.
- FGMA: I think now that I'm looking at maybe changing—I've been working in the corporate world for a few years now, and now I'm looking at changing my career, maybe starting a business of my own. I've definitely starting using my phone, like Instagram and things like that, a lot more, to see what other people are doing. And so, it's become more a part of my life now than before I used to go days and weeks even without looking at Instagram or other social network websites or apps. But now I want to stay on top of everything and I'm following more people. So to me, it goes again back to work and that professional aspect.

Moderator: So I'm hearing that utility, convenience utility kind of, they go hand-in-hand is, in this case, for three of you, something that what technology does for you. Is that fair to say?

FGMA: Mm-hmm.

FGMA: Mm-hmm.

Moderator: And the fun and convenient—not fun. The fun and experience of technology is not necessarily something you seek?

FGMA: Not really.

FGMA: No, I wouldn't say to seek it. It's—or I wouldn't say I seek it, but it's sometimes a fringe benefit after finding it.

Moderator: Now, next question. Is your new technology easy to use?

FGMA: Yeah, I mean, I think iPad, iPhone is particularly easy to use, the platform, the way it works. Some new technology is not easy to use, like the new Windows, the previous one. I couldn't—pretty much wanted to kill someone when that was—I guess I didn't realize they tried to make it like a tablet on a computer screen, so I could never figure out why there was two different kind of screens, but I would say most new technology generally is easy to use and I think they—I mean, my one year old figured out swiping is the way to move on an iPhone. So, I think they design it to be intuitive. So, I think a lot of this stuff is pretty intuitive. And I don't think an app, for example, survives or becomes successful if it isn't. Because, I think attention span for a lot of people is pretty short. So, there's so much out there, if something doesn't grab you and be easy. Like people would be on to the next thing.

Moderator: It seems having your Fitbit, that's a relatively newer technology that you received as a gift. So, probably earlier in the adoption stage than you may have been otherwise. How was that to use?

FGMA: Marginal, I would say. It's not really intuitive. And it doesn't work with 4S, which is quite annoying. There was a glitch in the system. So, I need to upgrade my phone if I want to have the full benefit, which is something that really ticks me off about technology in general, is the cost in upgrades, and having to update my software and that's the a little off track.

Moderator: No it's—everything is on track.

FGMA: The change—the constant change can be frustrating, definitely.

FGMA: I agree with that. I think I've had the same Samsung—I have an Android and my sisters both have iPhones. They say it's the best thing. I just cannot get myself to—when I use their phone, I'm lost. I don't know what I'm doing. And so for me, to go and buy an iPhone when—the newest iPhone, as opposed to an Android, which I'm used to is—I'm always turned off. I'm not going to go and learn that whole new system. So, that's one thing that kind of deters me from buying something else. I'm used to my phone, I know how to use it. Do I really want to go through the trouble of upgrades and learning and all of that? It's kind of lazy, but it's always in the back of my mind when thinking about buying new phones.

FGMA: I agree, I don't—I usually don't care. Like when I bought my phone last year, so first of all, they kicked us off BlackBerry at work and that was like, I actually thought I was going to melt down because the BlackBerry, I've been using it for like 10 years, honestly. And the keyboard, the fixed keyboard was something I loved on the BlackBerry because the touch thing, I can't stand the touch typing. So they would not let us get BlackBerry, but even when I purchased my iPhone, and they were like, don't you have the six or whatever. And I was like, "No." It was like, I don't want to spend the extra money, I don't care. But I think it's also just like being a little bit of a creature of habit. Like I was used to the BlackBerry platform. Now that I have iPhone, I can see that there's so many things that iPhone could do that BlackBerry could not do, although I still feel like BlackBerry is king of business. But in the moment, I was like, this is working for me. And maybe that goes back to your, "is new technology appealing to you?" If this is working for me, unless you can show me a big reason. Like my [spouse] is an early adopter, for years, (s)he's like, "why don't you get rid of that BlackBerry and get an iPhone, get an iPhone, get an iPhone." I'm like, "you go to the iPhones, I don't really need it." "We can take better pictures—you can have your own pictures." I'm like, "Well, you have it." And I don't really—so, I have to see something that's really useful for me to be able to—I don't like change very much. So, to justify the change, there has to be a significant benefit.

FGMA: There's a degree of inconvenience with all the change too.

FGMA: Yeah.

FGMA: Now, I got to take the time to relearn the system or—and icons are constantly changing.

FGMA: All your contacts. All your photos, everything. You're almost roped into one system, right? Like now, I would never go away from iPhone, because everything's on my iCloud. Now, I'm not going to get an Android because I'm not going to start messing with the iCloud, right?

Moderator: All right, I want to talk about a new field of discussion here. What or who influences the purchase of a new technology or the acquisition of a new technology?

FGMA: Personally?

Moderator: Yes.

FGMA: My [spouse] or my kids will influence the purchase. “[parent gender identity removed], your cell phone—your flip phone is creaking when you open it.”

FGMA: It’s embarrassing.

Moderator: Let’s explore that, your [spouse] or kids are influencing your purchase. How are they doing that? I know you said it’s creaking when it’s opening, which might—how does that influence your purchase?

FGMA: How does my family influence the purchase?

Moderator: Yeah.

FGMA: Most likely because they’ve adopted it previously. And I can see some of the things that they’re able to do with it. My staff as well influences my purchases in terms of technology. Again, I can see what they’re able to do. I’m the same with social media in terms of business and company, seeing a different platforms for social media. I have a lot of different influences that will drive—and friends. And I’ll see something that they’ve got and see the things that they can do with it. The Fitbit, my accountant has one of those, so I thought that was kind of cool. Although, it was a birthday present, I knew it was coming. So, quite a lot of influences. But when it comes to going to the desk and saying, we’re going to purchase this one, my [spouse] tends to do all of the research and really nail down which products are best or more suited.

FGMA: For me, I think my son and my—the lifestyle that we have. For example, if I see that, like the laptop that we have, that is what we go—we take on trips. So, we watch movies on the plane. I probably wouldn’t have had it for myself. I probably would’ve had a book or something else. But, it’s the kind of a new lifestyle now with a five year old. So, definitely family driven. What can we do if there’s something that he can learn, maybe an educational component or something that we can do faster or easier because of a technology, then it’s lifestyle driven. Yeah.

FGMA: So the—I think we all talked about this, but cost is part of it. It influences what I choose. I’m an intense researcher, so you mentioned your [spouse] does that. I’m not an impulsive buyer, so I actually say that the Internet gives me analysis paralysis, because I can’t buy the simplest thing without having

done like 10 hours of research on the product and is this better or is that better? What's going to suit me? So, I would say that my own—when I purchase something, I want to feel like I made the right choice so that drives—influences what I buy. And I would say also to a certain extent, like my [spouse] also—someone who really likes technology and is an early adopter, less of a researcher, more of the wow factor, would have some influence, but that would always be tempered with my intense analysis into the product.

Moderator: I want to pick up something you said. You said, “I want to make sure I pickup what is the right choice.” What are the factors that make it the right choice for you?

FGMA: Well, there's a few things like how is it going to work? So, I'm going to go back to my BlackBerry, because you know, obviously that was a traumatic experience in my life. But the idea of—so BlackBerry used to work with Outlook and that was a big deal for me, because that was my work [INAUDIBLE]. So, I needed to have something that would give me that similar experience for email. That was the main thing for me. And then I realized a lot of the folks could sort of do that. So, then it was more about things like, I guess, what other features could it have that I could want? And then the other thing is durability, because—warranty or whatever. One of the things I find about the way things are made now is they're not—new technology doesn't seem to be made to last, right? Like you can see people who have TVs, like those big TVs from the 50s and they're still going. And yet, you can buy a flat screen and three years down the road, it blows out. So, I would think, people are—if I go on the Net and people are commenting like, “I bought this and it was good for the first six months, but then I had all these problems,” and a lot of people comment about that. That would be a negative in my book, because if I'm going to make the investment, and I kind of loathe to change, then I would like to have something that's going to stick around for as long as possible.

FGMA: I agree.

Moderator: Can you think of anything else, other than what you've mentioned, influences your decision making? In your case, it was research, family and friends, and for you it was the needs of your son. Is that fair to say?

FGMA: Yeah, exactly.

Moderator: Is that what I heard? Is there something—anything else that you think influences you? It's got an H beside this question, because it's hard.

FGMA: It is.

FGMA: Well, there's a little bit—and I think you alluded to this, but you're in a world where everyone has this stuff. And you sometimes think, you don't want to be walking around with the flip phone, right? Like there's a little bit of the expectation of other people of what you have based on—people expect you to have certain things at a certain level. Like it would—if someone doesn't have a computer at home now, you'd be like, "What? You're not on email?" Some of those things expect—it's an expectation that's created for whatever your level is at work or what you should have or how people should be able to be in contact with you. If you see someone walking around with a really old phone, you're like, "why do they have that old brick," or whatever. So, there's a little bit of maybe societal pressure, in terms of, it's kind of a bit of a status symbol in some way. So that, in a way, it influences you and I think that's not just with phones, that's with lots of things. Like people think about that in terms of what car they drive and all those things. So, there's a bit of that, I think.

FGMA: I'd say for me, in terms of—are we—I don't know if we're discussing laptops, for example, right now. But, for me, the thing that influences my purchases in that sense is work as well. So, I do graphic design. So, I look for things that will make my work easier, a better screen or a better system or a better mouse. Just those things.

Moderator: When you say see that, though, I mean, that information has to come to you somehow. And that would be the influence. How is that coming to you? How you get [CROSSTALK].

FGMA: How I think, for example, Mac. Is that?

Moderator: Or you're thinking of a computer or a piece of software, or a mouse and how are you getting that information, or how is that information being communicated to you, that influence—might may or may not influence your decision?

FGMA: I usually go to Google, look at reviews, research, past experiences as well from work, seeing other people work with PC versus a Mac, feedback from colleagues. So, just a combination of all of those things, but mostly, I would probably go and research best computer for graphic design, let's say. And I'm just throwing that out there, but I would probably do my own research and count on maybe one or two of my close colleagues that are experts in telling me, maybe, you should buy that, and I would trust that over anything else, yeah.

FGMA: I have an IT consultant for our business, and he's probably the biggest influence in terms of our computer systems and choices there, and the right graphics software.

Moderator: So, and I'm belaboring this as one last point on this, is there another factor? Anything else there? We've mentioned quite a few here, and I'll just review quickly. You talked about something that's going to last, something that I'm going to pay the money, it's going to be around. That it meets some sort of social expectation, whether that's conformity or status. You mentioned, again, does it—I'm going to—through my research, I'm going to do what you mentioned, a consultant. Is there any other factor that you think that might push a hold out to finally decide to make the jump?

FGMA: I think we sort of touched on it earlier, but for me, wanting to see the new technology is sort of tested and proven before I jump in. I was involved with one of the first smartphones in Calgary about 20 years ago. And they had a whole new wiring system that was great, but it was obsolete in about three years. So, I really like to wait and make sure that it's something that's going to last and not be obsolete in a couple of years.

FGMA: I think sometimes I'm pushed, literally, because the previous technology is just no longer available. So, I had to buy a really cheapest Blu-Ray DVD player, because the other DVD player wouldn't play the new CDs, the new movies. And it was just—I wasn't in the market for it, but I had to buy it. And it's not the latest technology, but it plays the movies. So, in those situations, I think it's just—it's no longer there, you have to buy it. And just, it's being discontinued or whatever else. It has happened to me a couple of times.

FGMA: I think that's a really good point, the proprietary on software or devices, Samsung versus Sony and not being able to download files between the two, so it does influence—I'll never buy another Sony anything, because it's so proprietary.

FGMA: And kind of touching on the obsolescence, like there's certain things that you want to do, you see other people are doing them or certain—and you can't like—this is what you mentioned, but you can't do them if you don't adopt this technology. You have to, or you can't. It's not workable what you're doing anymore. You want to do this new thing that's better. So, to think, I'm going to have to acquiesce and buy this, or else I won't be able to do it at all, because they do phase out, old things, or there's only certain ways of doing things now.

Moderator: We're going to wind down, with this is good. With three people, it goes a little quicker. I'm going to close on this—the next couple questions here. Can you think of any reason why someone may not adopt a product that we haven't covered yet? This is not late adoption. This is not adoption.

But on the other hand, a lot of people do pay the \$600 dollars. So, I don't know. Maybe that is an aspect of—that financial aspect.

FGMA: Like we touched on so many of these things already, but the only thing sort of related to what we talked about is, we talked about it enhancing your life. I can see someone not adopting it because they actually not only think it won't enhance their life, but it will—like the opposite, detract from their life, this technology. So, I guess I could see that, if someone had the perception that, like you talked about, you're not on Facebook. Or if you have the notion that this is going to take away. So, I think, for example, with automation of things, that a lot of people lost jobs during automation. While it improved some things for other people, this automation was extremely negative. I have a hard time thinking of a specific example to an iPhone, other than that it kind of reduces social connectivity. But if you perceived that it would really make your life worse, as opposed to making it better, then you probably wouldn't adopt it, because not only it wouldn't be useful, but it wouldn't—it would make things worse.

FGMA: I personally considered going back to a flip phone not too long ago, just because I felt like I was—any minute that I had free, I was like go on Facebook or just check something even though I just checked it an hour ago. And I just started feeling like, I don't know what I'm—if this is what I want to be doing. So, I considered going back to just something very simple, something, talk and text maybe. And then my mom had lost her phone and then found it, so I got her old phone. But I see it as, I totally understand what you're saying is—was it really making my life better? Or was it taking time from other things that are important to me in my life? So, in the last few months, I don't really take a picture when we go out or go on a bike ride or we see this beautiful scenery or with my son, or he's doing something cool. I usually leave my phone somewhere else, and I want to enjoy it, instead of worrying about, go stand there and I want to take a picture. It's always with selfies and stuff like that, I just started feeling like maybe this is not for me. Maybe it is for some people, but I started feeling that way. Maybe this is not really improving my life.

FGMA: When you see a lot of people are actually getting off things like—I know a lot of people that have gotten off Facebook. Like, I don't use Facebook very actively, maybe like voyeuristic things. I don't post—I don't like my life being so in the open. And in fact, when my [spouse] wants to post things, a lot of times, I'm like, "No." Because I feel like if something's really important to me and I want someone to know about it, like I'll just pick up the phone and tell them or I'll see them in person. And if they're not in that relationship with them, then maybe they don't deserve to know. So, in that way, I see that some people are kind of having—who didn't grow up with the technology like younger teenagers or whatever, actually take a step back from some of this stuff, like you saying, selectively using the technology. So, not using

Facebook, and I don't have an Instagram or a Pinterest or Snapchat. I don't even know what it is, but I know it's out there, right? So, yeah, I do think if people perceive that the technology is doing something, but it's taking away from some other enjoyment, then maybe it's not worth it.

FGMA: I will not adopt a selfie stick, for sure.

FGMA: Never.

FGMA: Unh-unh.

FGMA: But in terms of technology, a tablet I've never seen a need for one. I'm not interested in electronic books. I'd rather open the real thing, so I know I'll never have an electronic book. So, things that I don't perceive as being a benefit. The tablets, I'm in front of the computer screen for a good part of the day at work. I got my phone if I need to connect or check something on Google to settle an argument, but I don't see a need for a tablet, so I don't see myself every adopting that.

FGMA: And I could see health reasons too. Like some people feel very strongly about how these devices are impacting their health, rightfully or wrongfully. Sell waves and all kinds of things, so I can see some people not adopting because—a technology because they might feel it's detrimental to their health, like there's a health risk associated with that. And even with the reading, right, like the backlight is another thing. A lot of people saying that's not good for your eyes and too much reading of backlight. So, I can see some people rejecting a technology because they feel that there's a health concern in the adoption of it.

FGMA: Maybe that's more the point for my rejection of it as well, is the backlit screen.

FGMA: Well, there's the—I also think there's the feeling, right? Like it doesn't feel the same to read this way, as opposed to holding a book. But you'll do it and then if you travel there, you see the convenience. You can have 10 books, magazines, whatever, and it's just this—

FGMA: A little lighter.

FGMA: Like for that, it's amazing, right? So, but it's not my preferred way of reading.

Moderator: All right. This is it. Is there anything else anyone would like to add on anything, related to tonight's activities, they haven't mentioned—or maybe forgot to mention?

FGMA: Do we win free iPads? No, I'm kidding.

Moderator: You're not going home with iPads, I'm sorry.

FGMA: No.

FGMA: I don't think so. I mean, I didn't mention, he asked about an iPad, that I also did not purchase that iPad for myself. That was purchased, I don't know if that's important when you're collecting your data.

Moderator: All data's important.

FGMA: It is important?

Moderator: All data is important.

FGMA: All data. Well, I did purchase a phone, because I was forced to purchase a phone, the BlackBerry phase out, which by the way, took me three months to come to a decision on what phone, which then, out of spite, I was angry because the prices had gone up, so I would not even consider a different phone. But the iPad was not—was purchased for me.

FGMA: I don't know, I'm not a conspiracy theorist, but sometimes I feel like we're just being led down the path with all these upgrades that everybody has to have, to some degree. And I sort of reject the whole notion of constantly having to upgrade or have the best and the newest, just so that the shareholders are getting their due.

FGMA: I think—sorry, one thing you said, conspiracy theory. Another reason, I think some people are reluctant with new technologies. The idea that you're being watched a lot. Like some of the things I use, like they'll say, I notice now if I search, for example, something on Google, that all of a sudden like a couple days later, there will be an ad on the side and it will pertain to something I was looking for a few days before. Like, there's this sense of being watched, like there's no privacy of any kind. So, even, I've been using my PC for purchases at Superstore and now I'm on this click and collect thing, so I can order my groceries, and they've actually tracked everything I've ever bought, and they're like, "Hey do you want us to sample a shop for you?" There's a bit of creepiness to it, where you feel like, I can't do anything. Like I search for a flight to Portland. All of a sudden, all the ads for the next week are like, "Do you want to get a hotel in Portland? Do you want to rent a car? Here's some things you might like." While that could be convenient, it also feels invasive. So, I can see why some people would be reluctant to adopt new technology because there's a sense of invasion or now there's all this cyber crime, where taking over your computer and forcing you to pay money. There's no privacy left for anything, even with Facebook, nothing. There's nothing, not even your personal phone, they track what you look at and then they send you stuff.

You'll get some kind of email. We noticed you were looking at flights to Portland. Like, so, I do think in some ways, that does create a reluctance, at least on my part. I just—sometimes I feel like I want to be left alone. And there isn't any of that. That's also the idea of always being in contact and know everything that you do is somehow monitored and used for marketing. So, I do think that's something unappealing to me about new technologies, that it seems like the new technology also comes with increased ways for them to then track what you do, so then they can market to you other new things that you might want to buy, right? So, it takes a little bit of anonymity away.

FGMA: Yeah. I think for me, I think I mentioned a little bit of this before, but it's more this new technology and apps and social media and all of that, it makes me anxious sometimes. And I think a lot of people feel the same way of you have to maintain certain standards. And you see, for example, on Instagram all the latest trends in fashion and what other people drive and where they're going on vacation. And you wake up and you have to go to your nine to five, but you see other people in Greece and, I don't know, Bora Bora or whatever. And it's just, it's creating this negative mindset of, "why not me? And I should have that." And then, to me, it's that, I don't want that social pressure. I don't want that anxiety of, I have to keep up. And so, I've kind of stepped back. And I know a lot of people that I know are on Facebook cleanses or—that's what they're called, I guess, Facebook cleanses or other things, "No, I'm off of it. I just don't want—I don't want to deal with it for now. I'm just going to take a break of all the technology," and you're just bombarded.

FGMA: Yeah, it can become overwhelming.

FGMA: It is very overwhelming.

FGMA: If you allow it. Like you can—it can easily runaway. Like when Facebook first came out and then I wasn't on it, like again, because I'm not an early adopter immediately, but I was on it. Like someone sent me a request and I'm like, I'll check it out. And then in the first—I remember the first couple of weeks, I was like, "Oh my god, did somebody friend me?" And I just wanted to like—and then after awhile, I'm like, this is sort of ridiculous, why do you care? But I do know people that, yeah, but it's—they're always posting on Facebook and this and that. And now when I look, not very often on Facebook, most people, it's just garbage actually. Very few people are even posting—the reason you sort of went on it, to keep in touch.

FGMA: Good things, yeah.

FGMA: Most people are like, here's a cool video, this guy driving off a cliff and into [INAUDIBLE]. I'm like, I don't really care. I don't know.

FGMA: Yeah.

FGMA: It's nice just for the sharing of information of people you care about, seeing pictures or—but—yeah.

Moderator: All right, I think this is a good place to wrap up. So, I want to thank you again for your participation, that's really great.

[END TRANSCRIPT FOR FOCUS GROUP 1]

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Moderator: Good we'll go on to another question here can you please tell your overall experience to date with new technology again for the sake of clarity we're talking Smartphone's, tablets and wearables.

FGMB I like that they have like a lot to offer but I'm not a very technological person so I always like need help with them I find But I have a Smartphone right now and I always need on to go to the Apple store. I'm there like twice a month because I need to figure how to like use it and how to do this and yeah.

FGMB I have to agree with that and as far as my...it's the experience with technology so far?

Moderator: Yeah you tell me your overall experience today with new technology.

FGMB So do you want to know what I've been experienced with or just any...

Moderator: Whatever you feel is...you want to discuss.

FGMB Well my experience so far has been with computers themselves, Smartphone's and I haven't really used any of the other wearable technology at all or any of the like sports like the FitBit... that sort of thing.

FGMB So my experience is with all those would be nothing. Is Samsung considered a Smartphone?

Moderator: Yes an Android based phone.

FGMB Okay yeah so I got that three and a half years ago and I'm still using the same one. I've never...I've no experience with wearables or tablets.

Moderator: All right why do you think you're not technological?

FGMB I don't know I just I'm not like I think it's just if it's too hard to use I don't want to go through that thought of trying to use it.

Moderator: And why do you think you've stayed away.... both of you have stayed away from wearables or tablets?

FGMB Again it you know it's something that I think about but never feel I have the time or the energy to put into it and it's not something that comes easily for me. And to be honest I mean it's not like I spend my days researching it on the net. I do... I prefer to do other things.

FGMB I could echo all that. Yeah I'm not gadget oriented and so to me it just seems like adding a lot of complications to my life. Umm.. and I've yet to see the necessity for me. Like I don't really...I know that I get lots of exercise and I know that I'm fit and I know that I probably eat too many calories in a day and I don't a thing to tell me that ... because I already know and in terms of a tablet well I've got my desktop and I've got my phone and I've got a computer at work and I just...there's no need I don't see it bridging a gap in my life, I don't feel there's a gap in my life or any of those things.

Moderator: We'll move on to another question what feature of the new technology so this is a Smartphone.... such as a Smartphone in all your cases I think... do you think is most used by people on a daily basis?

FGMB Probably like text messaging and a lot of the apps like the social media apps like Instagram, Facebook, Twitter.

FGMB You know another thing is just looking things up on the Internet at any time any place as well. I'm thinking along the lines of a phone of course.

FGMB Which feature is most used? I'll bet you it's music like I betcha if they researched it would be music off their phones.

Moderator: Okay let's move on to so specific is when you mean music you mean kind of music that they have listen to it treating it as a music player?

FGMB Yeah and listening on their phones to music that's in there. yeah. I bet you that would be the most because that takes longer than a text. I bet you more people spend more time listening to music than they do texting or emailing on their phones.

Moderator: Okay.

FGMB Like even though I don't personally, but when I look around what I see and my perception of that would be that it's probably spent listening to music most time yeah.

Moderator: And you said accessing the internet searching what do you feel that they're searching for?

FGMB Anything seriously. But I think I'd certainly agree more with you I think that I think when I see people on their phones whether it's texting, texting, texting and at the moment Pokémon Go.

FGMB Yeah.

Moderator: So what benefit of new technology and again we can refer back to the Smartphone with your experience with that. So what benefit of the new technology compared to how things were done before? What's the benefit now of new technology?

FGMB Probably just like connecting with people is a lot easier now. Things like even like for example five years ago if I was to come here because I live really far in the North West I would have had to like go online and like write down the directions but now we can just like download the Google maps app then it like talks to you and tells you turn right here turn left here and then like I was here in like 20 minutes things like that. Like it makes things more convenient in a lot of ways.

FGMB When it works for me... yeah... so you're asking sorry

Moderator: The question was what benefit do you think new technology has compared to how things were done before?

FGMB Okay so you know I'd have to agree with the connectivity of it and as well like I say I just find looking up in the Internet and finding things you know the information is at my finger tips.

FGMB Yeah I think access to information is one of the huge benefits especially when you're travelling. I find it invaluable when I'm travelling to have quick access to maps... you know buying tickets whatever it might be. So just that...having that gateway to... productive gateway for navigating your way through strange places and even you know even right here at home being able to Google a phone number. Oh I should call Subara right now what's that number you know and going to a website of a restaurant right there on your phone at the Stoplight hitting call and making a reservation so yeah.

FGMB And I think like can even like Google the ratings of the restaurant and or use the Yelp or Urbanspoon or Zomato now that it's called and like see if it's worth going to. And I was just travelling like recently to Europe and like without my phone I probably would have been really lost because I would download apps on tell me where I would go and like how to get to a certain

place, how to get to the Eiffel Tower, how to get to the palace that Versailles palace yeah that just made my trip like so much easier.

FGMB I also like being...like having a newspaper all the time you know so when I'm eating my lunch I can just go and you know read all the highlights of CBC News all the different articles that's good too.

Moderator: Great so my next question has to do with again advantages of technology. Did you discover any new advantages of the technology say Smartphone's after you acquired it?

FGMB Absolutely I mean I never you know I think I was more pushed into buying these things it's like oh you got to get one of these. Oh okay all right I'll get one. And never saw a need before I got the Smartphone or an iPad or all those things that I happen to have. And then when I use it or I see other people using particular apps then I go, "Oh okay yeah I guess that's useful." But my first reaction is why would you want that?

Moderator: Can you give me specific about some of those advantages of technology?

FGMB You know again being available to people for instance my kids I know where they are when I need to get in contact with them. You know I'm much more comfortable with them being off. I...when I need to get in contact with somebody I can just do it all the time. So there's that, there's also as you said the Google Maps... I mean why I mean just look at the directions how difficult is that it's Calgary..., it's a grid. But I use it all the time now and other apps you know just now that I use them I think "wow" I think they've made my life a lot easier.

Moderator: Again clarifying the question after you acquired the technology did you discover something new?

FGMB Oh yeah loads of stuff and loads of stuff that I discovered new at the time but I've since forgotten how to do it... or never adapted it. You know so my kids would show me stuff that my phone could do but I never adapted it like that talk thing where you just "okay Google" and you just tell you can talk to it and you look things up I never used that. I know it's there I never use it. Another one that I discovered that I think is really good was the photos do you want examples?

Moderator: Sure yeah.

FGMB The photo like Google Photos where all my photos are always being saved into Google Photos and Dropbox. I like that. So you know I don't have to worry about losing my photos and.... you know then the extent of the apps that you can get, the scope of the apps that are out there and available.

There's apps for everything except there's one app that I really want but there's no app for. But anyways discovering them and maybe going through a bit of a phase with them but I never...they very rarely stick any of the extraneous features barely really stick with me. I'm pretty basic. Not as basic as grandma but you know yeah I don't...like they impress me at first a lot of them and then fall by the wayside.

Moderator: What apps have stuck with you and why do you think they've stuck with you?

FGMB That's a good question. What apps have stuck with me? My health benefits app, Group Source because I can take photos of my receipts and submit them right through that app, Whatsapp for communication with people has stuck with me. I'd have to actually like Facebook as an app, Instagram is an app that I like and so is I well what s the one where you can make collages with your photos layered or can you make...?

FGMB Isn't that Instagram? Like you can do that with Instagram too.

FGMB This is a different app can't remember what it's called but you bring in photos to it and then you can create a collage and then you can put into Facebook or Instagram or save it a message or an email or save it and your phone.

FGMB Wow! I've never used that no.

FGMB You know for a while I was doing that...I was letting the health one run all the time where it was counting your steps but then that just like the novelty of it just wore off.

FGMB Like My Fitness Pal like that?.

FGMB Yeah for me the novelty wears off so like as you can tell not a lot of...I find myself getting rid of apps on my phone quite often. Like the other day say an NHL one there and I thought when did that get on there, why would I ever want that? So I just uninstalled it. Oh Flixster that's a good one I like going in there for movie planning.

Moderator: Anything you want to add in there?

FGMB Yeah well before like another thing with the Smartphone's I find is like they connect you more to social media because before I had a Smartphone I would only go on like...I never had Instagram but I would only go on Facebook when I had my laptop open but now you can just download the app and say with the Instagram app and then I just I bet I'm always on those sites now. Like I'm always opening them to see what people are putting pictures and like

what people are posting. So I find that it kind of connects you more to social media like they get you addicted to social media.... and there are like just going on from where [name removed] said there's apps that you download and you think you don't need but like I download the movie theater app where you can like buy your ticket and choose your seat like on the app before you go into the movie. And like Google Maps I need Google Maps on my phone now because it like gets me everywhere.

FGMB It's kind of funny because after talking to you guys I have to say that I use very few apps and certainly less than you do and you would describe yourself as somebody who just doesn't find the utility of them and yeah I think you're right I've got about 100 apps on my phone and I look at about two or three of them. And...but that doesn't say or mean that you know I look at things on Safari all the time. I'm constantly looking things up so that's where I found the phone incredibly useful. And when I first found out that wow I can connect to this thing from my phone or when I'm out in in BC... that's the coolest thing ever.

FGMB Yeah I recently put the Audible app on for books and thinking I would use it and so then I the first book I went to get there was a problem I can't remember what but it wouldn't get on to my phone or I couldn't set up an account. Something happened and I've never looked at it since.

Moderator: So are there features about the new technology that have a little or no benefit for you or for people in general?

FGMB Clearly for me very few of the apps or lots of the apps.

FGMB Yeah like I don't...there's so many like apps I don't download either just the basics I guess.

FGMB Like I think a lot of the apps they almost attract from your life in a way or I guess I'm coming to the Facebook or Instagram...

FGMB Yeah it's addictive.

FGMB It the times suck or having to...it's so easy to be on those things all the time, and I'm just saying this from the point of view of my kids like, you know.

FGMB Even at like my work we have an issue with people using their phones while they are the phone with like citizens, and like our supervisors are cracking down on us so that if they see the phone in your hand while you are talking on the phone, like they get really angry or they write you up.

Moderator: Again refocusing the question, it's not just necessarily about apps which is obviously a feature of Smartphone's, but maybe beyond that anything

about technology, of any of the technologies we are discussing, that you think have little or no benefit.

FGMB I don't think the finger print security has any benefit to me, I don't know how it's...it's just novelty like...

FGMB Is that just like fingerprint to get to your phone?

FGMB Yes and then you just use it. The other thing that I think is that...it's the microphone so a lot of...so when I was in Ontario with some of my family, all of them were using the talk to text. So they would just...you hear them go "Jennifer what time are you going to be here" and you are sending a text, right to their daughter. And so my whole thing is well if you are going to do that, well you can just call her. That's my whole thing, but I can see how its quicker, I just, I haven't adapted that for myself but...gosh, like and this speaks to my apathy about it possibilities because I can't even think about the features that it has but I know that I don't even use my Samsung to its capacity, I know I don't. But it's even hard for me to bring them to mind about what all the capabilities are. Awareness would probably help, if I knew a little bit more about what they were I'm I using...

Moderator: So I'm going to chop this down to you don't know what you don't know.

FGMB Yeah you don't miss what you don't know.

Moderator: I'll move on to another question, this is something you might want to think about, a little bit. Why do people hesitate before buying new technology?

Female A: The first thing that comes to my mind is the cost because they can be so expensive, and people don't want to like invest that much money into a phone without really knowing what they are going to get out of it.

FGMB I was going to say its "alien" I mean that's probably going a bit far, but that's saying again that how easy is it going to be for me to figure it out and do I have the time to properly use this thing or is it going to be something that collects dust.

FGMB Is this the best one? I'm I making the right choice, there are so many options, I mean is this a good one? Do you want to explore it more, do I want to research it more, do you want to ask around to people who have one?

FGMB Yeah and along the same lines is they are coming up with a new one. Every year and so should I just wait till the next one comes out, and that's going to be better and...

FGMB Yeah will it have better features and I'm I going to regret getting this one now, yeah.

Moderator: Specifically is there any and maybe in your own experience reason that you hesitated before, I mean none of you have picked up a wearable I'm assuming, and maybe none of you has a tablet, is there reason you are hesitating on those technologies, or why one would hesitate before purchasing those?

FGMB I think in that case for me like I don't think I would look at it as it being terribly complicated, so in that perspective it gets more again I think along the lines of what you had said, if I know I have to exercise more, I know I need to exercise more, I know I need to eat better, I know counting steps would be a good idea, but I don't think I need a device to tell me that.

FGMB Yeah I own a tablet just like last November, and the reason I with, everyone in my family has a tablet, like my brothers have one, my mom has one, my dad has one, and the reason I waited is because I had a laptop before and I just didn't see what the purpose of the tablet would because I already had a laptop. But then my laptop died and I was going to get another laptop, but then a friend of mine who like knows a lot about computers and tablets was like just like from what you are using, which is like using the Internet and listening to music, you might just as well as get a tablet because they are less expensive and you are going to get everything you need from the tablet.

FGMB What was that question again?

Moderator: Why do people hesitate before buying a technology and specifically in your own experience...

FGMB Why do we...yeah. I guess I hesitate because it's a cool...do I really need this, I really question whether I'm really going to get the use of it and if that's where I want to put money. So that I question myself... "do I need this? "

Moderator: Lets move on to the next one, how does new technology fit into your lifestyle? It's a hard question

FGMB I can stick it into my purse very easily, whereas the old technology was a huge ...desktop, and I get as much use from that from my phone as I did from my desktop 10 years ago, so it fits into my life that way.

FGMB I think just because I'm never at home or I'm always out or at work, or whatever like it connects me more to like my mom, like it's easier to get in touch with my mum I can call my mum whenever, I can call my dad whenever, I can call my dad...its going back to what I said earlier it connects me more to people because I'm not there all the time.

FGMB How does it fine into my lifestyle, the new stuff, I get it in what I've got, like...other than what I got I don't see anything else...well I guess I don't really think it does fit into my life style because I don't have it. Do you know what I mean like I just have my phone, but I've had the same one for three and a half years so, I don't really see how the other stuff would fit...okay yes it would fit...not that it doesn't fit, I guess maybe I'm thinking that it doesn't really enhance, it wouldn't really enhance my life so...

Moderator: Well you picked up a phone only three and a half years ago which in the scheme of how long Smartphone has been around, they've been around nine years, what was it...was it a life style choice, or was it some other reason you got it.

FGMB Well I had like an iPhone before that one...well I mean I got my first cell phone in like 1995.

Moderator: Okay so you've had phones for a while...

FGMB So the best one is Smartphone those old flip, those aren't considered Smartphone's right?

Moderator: No.

FGMB Yeah so I guess each time it was time to get a new one, I would go with the latest and greatest, because it's the other one's weren't available anymore ...[laughing]... No, well you know I mean you do want to experience and explore the conveniences, the novelist and the benefits and the larger screen is a big one for me, that's a big one for me. So when I went from my Apple and when I settle larger screens, that was a big, oh I need that, I need to be able to "see" the screen well and not have to do a lot of moving the paragraph back and forth to read it, that kind of thing. So the larger screen was a big one for me, I miss mechanical keyboards though, like I was really resistant to the touch... what do you call that digital key no the non -mechanical...

Moderator: Touch type.

FGMB Yeah, was really resistant to that. So I guess the biggest thing that excited me was the size more than anything. Funny, eh? Yeah.

Moderator: This...this explore wearables they're still fairly new in the...a fairly new product. You have to know several years but not that long. And you said you were really into fitness and it's a part of your career is that correct?

FGMB Yeah.

Moderator: Yeah. I bet you know how to use the fitness wearables. Is there any reason that you don't use it or how to use it?

FGMB I can take my own heart rate or anybody's heart rate without needing a gadget which I find they're not that accurate. Like the only training was to monitor clients without the use of any gadgets. So I don't believe in calorie counting. Yeah, there's just there's no...there's no need for it. Like I can work with a client who's fine without a gadget. But when I'm with him for that hour, they would get really suspect if I was relying on something, right? If my intention was away from them for any reason...yeah.

Yeah, I don't know. I just...I don't see the need and I...to be honest I don't know any trainers that use them with their clients. I know there's group classes where they make you put on a thing. But that's specific to cardiovascular training. I guess if I had a client who...I was training for an upcoming competition and there needed to be marked increases in their cardiovascular, then I could see how a wearable might come in handy so you're not constantly doing the 10 second pulse and all that stuff. And they could maybe on their own as well. But me as a trainer, as a holistic trainer, yeah I don't see a need for it. And then when I do nutrition stuff with people, I don't teach calorie counting, I teach servings and portions. So, yeah.

Moderator: So let's move on to another question. Is your new technology or new technology in general, easy to use?

FGMB I think for like the most part yes. You have to get someone look. In my case I had to get someone to show me how to use it, but now that I know how to use it, it's pretty easy to use. I just find that my iPhone breaks down a lot, like I always have to go to the store to get them to like help me fix it.

Moderator: What specifically do they do to help you fix it, per se?

FGMB Like the other day I dropped it in a tub of water, and it didn't even...it didn't break or anything, it was fine. So but there was like droplets of water inside the phone, I could see it. So I had to go down there and they like hook it up to their computer and then they run like, I don't know what they do, but they run like a program right over, just to make sure that it's okay. Yeah. And then they offered me a new phone for \$70 which I took, yeah.

Moderator: Alright.

FGMB Or like one time with the apps, because my phone the storage was...I didn't have a lot of storage in my phone left, so I had to like delete some apps and I couldn't figure out how to delete the app. Because you have...I guess you have to like press down on the app and a little x appears. So I Googled it 'how

do you delete an app?' And then they said just press down on the app, a little x will appear and then just press the x.

And I was doing that but it wasn't look...no x was coming on. So I had to go to the Apple store and they were like, "Oh it's because you...the feature where you delete your apps, you have it disabled on your phone." So they just turned it back on for me.

FGMB I think I just use my phone very...in a very simplistic manner. And...so yes, I find it pretty intuitive. But I do get into a road block every once in a while and have started realizing, "Oh, if I look into settings, that might help me out." But...but yeah overall I find it pretty easy to use.

FGMB Yeah, I find it easy too. I find my new...my Samsung easier than iPhone. So but yeah. Sometimes I have to ask people for help or when something goes wrong it's a complicated process. And I'm going to the store and they back everything up, send your phone off repair and give you a little stand in phone and download your stuff onto there and it can be such a rigmarole if something goes wrong. So the speaker on my phone has been broken for a year and I've never gotten it fixed.

FGMB That was the same with me. My speaker was broken for like six months and they told me you have to back everything up and I just didn't know how to do that so I just ignored it. But then they gave me a new phone so...

FGMB So I have a red phone, like a phone with a curvy cord and I plug it into the top, to answer my phone calls. Unless I'm in my car on my Bluetooth, and that works. But I can't just go, "hello." I have to plug in my red thing.

FGMB Yeah, oh yeah.

FGMB So and I've been satisfied living like that for a year. And everybody is rolling your eyeballs at me. Like, "I'll get one. Soon I'm going to have it on." Work through all my, what do they call that? Your credits. So you get an...hardware upgrade for basically free.... so yeah.

Moderator: Okay and...another direction. What or who influences the purchase of new technology? What or who for both?

FGMB Family, definitely [spouse].

FGMB Yeah probably like my friends because all my friends always get everything before me. And then I just get their opinions on it and then I purchase whatever they tell me works best with them.

FGMB And the other thing is, is we started at a long time being Apple users and so I like to go with what I know. And so we've just kind of kept with Apple all along and that does make it easier as far as...purchase decisions.

FGMB For me it would be, it's broken, so time for a new one. And I just get the point where. Like I remember with my iPhone it was the cracks, it had like some cracks so like that just forced me the issue. And I have one son who is really up on all the latest and greatest and he is an Android fan. And so he has the ability to influence me.

Moderator: Is that in your move from your iPhone to your Samsung. Was that influence from your son?

FGMB Yeah. And just explaining how it connects with Google and how it's a much better system than Apple. Like he can give you all the reasons and so I just believe him.

FGMB That's like my best friend too. She's a huge iPhone fan. She's had one since like we've been friends. And then I had an Android and then I switched to an iPhone because I felt like she really influenced me to get one, because she loved it. Like she was like, "Oh the camera's amazing on this, like its way better than your Android. And it's just like such a nicer phone." So I got that.

FGMB Actually there was a big reason I switched was the camera was better in Samsung. The S5 or whatever I have. So for a better camera that is one of the big reasons for me switching.

FGMB Well and I have to go backtrack to one of those earlier questions. I mean what are the...how has technology enhanced your life? Having a phone that is connected to a camera and then not having to have two separate items

[CROSSTALK]

FGMB When you travel, you don't...yeah, it's so great to be camera free, yeah. And still taking quality, like best photos. Yeah.

Moderator: Can you be more specific of say not personal influences? Of...that would influence your decision to purchase or to attain the new technology? But influence by your friends and your family and your family. What other influences are there that would...You said your phone being done, broken. Is there other...are there other influences you think that affect your decision?

FGMB Well the margin cost comes into play. But as I say we're so or and I am particularly, just hung up on Apple because everything we have is Apple.

That even though it's more expensive we...I would go for it because I'd like to go with what I know.

FGMB Probably like what's trendy too. I feel like iPhones are a lot trendier than the Androids. I feel like, even like, I follow like celebrities of Facebook and or Instagram and they all have the iPhone and it's...I just feel like that plays a huge part of it like Famous people are buying and what's like popular in society right now.

Moderator: Right, so this again so influence from kind of social network, people on social networks what they're using and Kim Kardashians, Blackberry broke...

FGMB Yeah, she got an iPhone so everyone has to get an iPhone, yeah, yeah.

FGMB Well I guess for me what my desktop was important so that compatibility, so not getting a bunch of you know like sticking to one system is important to me. Because my PC has Google and Android's Google, so that was important, you know what I mean? But I don't know how much I'm influenced by the media. I'm sure I am, we all are to some degree influenced by the media commercials. Like I don't watch a lot of TV but there's always ads and you know.

Moderator: This is just last bit on this influencing. Do you think there's any other factors that maybe not for yourself but might influence a hold-up to make a technology adoption or purchase?

FGMB Yes. I guess in some ways concerned about how it might be harmful, but I'm not too concerned about that but having a...I mean we keep going back to phones but just is it somehow an invasion of privacy. Because every time I write an email or when I'm looking stuff up on the Internet there are ads that can come up and be associated with what I previously been writing or looking up and I just go, "Okay, well somebody is watching me." That's sort of thing.

FGMB Yeah, it's remarkable actually. Yeah, you buy a pair of shoes online and you go for a while there's shoe advertisements some...

FGMB And sort of like that dark hole that just keeps sucking you down, I can't remember what the term is for that but you know as you go on a tangent from one site to the next to the next to the next.

FGMB Or like someone's like way of thinking like my uncle won't get a cell phone. To this day he's never had a cell phone because he's just so like...his mindset is like we don't need these devices, we depend too much on them we don't need them.

FGMB Is it a defense do you think?

FGMB Yeah, like he won't get one, yeah.

FGMB Yeah, my dad never did have one.

FGMB Yeah, he's older too like he's 70, yeah. So I think it's just like an old fashion way of thinking maybe.

FGMB Yeah, some do, some don't for older people, yeah. I don't know like for me... so like another hesitation brain cancer...

Moderator: Another reason why people hesitate and/or...sorry in this case, what would influence them to get it, like reduce one of those barriers whatever those might be?

FGMB Oh... to get it?

Moderator: Yeah, to get it.

FGMB Oh sorry on this...

Moderator: That happens.

FGMB Keeping up...well certainly you know I think wanting to keep up with my kids a little bit and not be like a totally outdated parent and be able to see some of the fun things they're seeing and doing and experience some of the things they're experiencing in that world that is so much a part of their lives, like way more than mine, way more. But yeah it's certainly that feeling lifts some of the hesitation, okay well I don't want to like, I don't want to fall behind like too much. I don't want to fall behind too much. I don't need to have a smart house where I can change the temperature when I'm overseas and stuff like that but I don't want to fall behind too much, yeah.

FGMB Yeah like convenience too. I think just because like now everyone's always... like you're a work and your mom or your like [spouse] or your [partner] is at work or they're out, it's just so much easier to reach people if you have a smart phone now. Like you don't even have to call them, you can just text them and they'll get your message.

Moderator: All right, we're going to close off here with this last question. Is there anything anyone would like to add what they haven't mentioned or forgot to mention for this discussion?

[DELAY]

- FGMB You're looking at me but I can't...
- FGMB Yeah, I don't know. I feel like they can be negative, like they can be a negative influence in our life because it's like I said earlier if you're [???] [0:46:05] work like people become so addicted to their smart phones that I takes away some parts of your life.
- FGMB Yeah, I believe that there's a whole generation that don't know how to socially attract properly and it's an interference with relationships with people that can't leave it...put it away for a while.
- FGMB Yeah, like I know some people and if we go out to like get something to eat or we'll go to a movie they just spend their entire time on the phone, like even at a movie and I'm like, "Hey you're at a movie theatre. Like there's a movie in front of you, why are you so addicted to your phone or what's so fascinating on your phone that you can't give your attention to anything else?"
- FGMB Yeah and they're little fashioned too that way. Like I don't believe that we should just live through here, like needs to live with their heads up more and experience the world. You know three-dimensional visceral manner instead of...some people are just...like it's their identity and they somehow...it's almost like they go a bit of withdrawal or they're addicted, like they really are.
- FGMB Yeah, like in January I got like T-boned when I was driving home and the guy was on his phone. He was texting and he like...like my car was completely totaled. Even the police officer he was like, "It's a miracle that you aren't like even hurt." Yeah, just people are so like attached to their phones now. They can't even drive without that phone in their hand.
- FGMB Yeah, it becomes an approval...they use it for self-approval too because someone will post something on Facebook and then they're constantly checking to see...
- FGMB To see if they've got likes, yeah.
- FGMB Yeah.
- FGMB See who replied and...
- FGMB And does it sort of lead too absolutely zero attention span too, I mean because you're going from one thing to the next to the next to the next and can you really...you know is contributing to kids having problems in school because they can't concentrate on one thing.

FGMB Yeah, I think there's...you know I'm just enough of a rebel that I wouldn't want to ever become overly reliable on something like that. I'm just enough old school, that I wouldn't want it to run my life. Now if I had someone in my life who would...took over all that stuff and like they said "I'm changing up the computer and I'm changing their phones so that they talk to this" and they stop using smart house pictures and they just handle it all and everything I wouldn't opposed to it. I wouldn't be opposed to having it more integrated in my life if I didn't have to manage it all.

It's not getting it that's hard; it's **managing** it all I think that becomes the sore point for me. And the more stuff you have like that the more **management** it takes, I think.

Moderator: Well I think we" wrap it up unless there's anything last thing that people want to mention or say.

FGMB No all good.

Moderator: All good? I'm going to...

FGMB Did we help you, did you get...?

Moderator: You know what it all...data is data. There's no help or not help, so it's all data to examine. So thanks a lot. Grab any leftovers, you have kids, for cookies and/or whatever you want to do and...

Yeah or take them all with you and then blame it on your kids. Again, on this sheet, there is a...

[END TRANSCRIPT FOCUS GROUP 2]